

Service Manual



Colour Television TX-28WD1C TX-28WD1E EURO-2S Chassis

Specifications

Power Source :	220 - 240 V AC, 50Hz
Power Consumption :	115W
Aerial Impedance :	75Ω unbalanced, Coaxial Type
Receiving System :	PAL B/G SECAM B/G, D/K
Receiving Channels :	VHF E2 - E12
VHF H1 - H2 (ITALY)	VHF A - H (ITALY)
VHF R1 - R2	VHF R3 - R5
VHF R6 - R12	UHF E21 - E69
CATV (S01 - S05)	CATV S1 - S10 (M1 - M10)
CATV S11 - S20 (U1 - U10)	CATV S21 - S41 (HYPERBAND)
Intermediate Frequency :	
Video	38.9MHz
Sound	33.4MHz 33.16MHz
Colour	34.47MHz 34.5MHz-(SECAM)
	34.65MHz-(SECAM)
Video / Audio	
Terminals :	
AV1 IN	Video (21 pin) 1 Vp-p 75Ω Audio (21 pin) 500 mV rms 10kΩ RGB (21 pin)
AV1 OUT	Video (21 pin) 1 Vp-p 75Ω Audio (21 pin) 500 mV rms 1kΩ
AV2 IN	Video (21 pin) 1 Vp-p 75Ω Audio (21 pin) 500 mV rms 10 kΩ S-Video IN Y : 1 Vp-p 75Ω (21 pin) C : 0.3 Vp-p 75Ω
AV2 OUT	Video (21 pin) 1 Vp-p 75Ω Audio (21 pin) 500 mV rms 1kΩ Selectable output (21 pin)
AV3 IN	S-Video IN Y : 1 Vp-p 75Ω (4-pin) C : 0.3 Vp-p 75Ω Audio (RCA x 2) 500 mV rms 10kΩ Video (RCA x 1) 1 Vp-p 75Ω
High Voltage :	29.0 kV ± 0.7kV at zero beam current
Picture Tube :	A66EAK25X21 70 cm (110° deflection)
Visible screen size:	66 cm
Audio Output :	
Internal Speaker	2 x 20 W (Music Power) 4-8 Ω Impedance
Headphones	1 x 8 Ω Impedance
Accessories supplied :	Remote Control R6 (UM3) Battery
Dimensions :	Height : 552mm Width : 820mm Depth : 480mm
Net Weight	41.5 kg

Specifications are subject to change without notice.
Weight and dimensions shown are approximate.

Technische Daten

Netzspannung :	220 - 240 V AC, 50Hz
Leistungsaufnahme :	115W
Antennenimpedanz :	75Ω asymmetrisch, Koaxial - Typ
Empfangssystem :	PAL B/G SECAM B/G, D/K
Empfangsbereiche :	VHF E2 - E2
VHF H1 - H2 (ITALY)	VHF A - H (ITALY)
VHF R1 - R2	VHF R3 - R5
VHF R6 - R12	UHF E21 - E69
CATV (S01 - S05)	CATV S1 - S10 (M1 - M10)
CATV S11 - S20 (U1 - U10)	CATV S21 - S41 (HYPERBAND)
Zwischenfrequenz :	
Video	38.9MHz
Sound	33.4MHz 33.16MHz
Colour	34.47MHz 34.5MHz-(SECAM)
	34.65MHz-(SECAM)
Video / Audio	
Anschlüsse :	
AV1 EINGANG	Video (21 pin) 1 Vp-p 75Ω Audio (21 pin) 500 mV rms 10kΩ RGB (21 pin)
AV1 AUSGANG	Video (21 pin) 1 Vp-p 75Ω Audio (21 pin) 500 mV rms 1kΩ
AV2 EINGANG	Video (21 pin) 1 Vp-p 75Ω Audio (21 pin) 500 mV rms 10 kΩ S-Video IN Y : 1 Vp-p 75Ω (21 pin) C : 0.3 Vp-p 75Ω
AV2 AUSGANG	Video (21 pin) 1 Vp-p 75Ω Audio (21 pin) 500 mV rms 1kΩ Selectable output (21 pin)
AV3 EINGANG	S-Video IN Y : 1 Vp-p 75Ω (4-pin) C : 0.3 Vp-p 75Ω Audio (RCA x 2) 500 mV rms 10kΩ Video (RCA x 1) 1 Vp-p 75Ω
Hochspannung :	29.0 kV ± 0.7kV bei Nullstrahlstrom
Bildrohre :	A66EAK25X21 70 cm 110° Ablenkung
Visuelle Diagonale :	66 cm Ableitung
Ton Ausgangsleistung :	
Einbaulautsprecher	2 x 20W (Musikleistung) 4-8 Ω Impedanz
Kopfhörer	1 x 8 Ω Impedanz
Mitgel. Zubehör	Fernbedienung R6 (UM3) Batterien
Abmessungen :	Höhe : 552mm Breite : 820mm Tiefe : 480mm
Gewicht	41.5 kg

Änderungen der technischen Daten vorbehalten.
Gewichte und Abmessungen sind Näherungsangaben.

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SAFETY PRECAUTIONS**General Guide Lines**

1. It is advisable to insert an isolation transformer in the AC supply before servicing a hot chassis.
2. When servicing, observe the original lead dress in the high voltage circuits. If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit.
3. After servicing, see that all the protective devices such as insulation barriers, insulation papers, shields and isolation R-C combinations are correctly installed.
4. When the receiver is not being used for a long period of time, unplug the power cord from the AC outlet.
5. Potentials as high as 30.0 kV are present when this receiver is in operation. Operation of the receiver without the rear cover involves the danger of a shock hazard from the receiver power supply. Servicing should not be attempted by anyone who is not familiar with the precautions necessary when working on high voltage equipment. Always discharge the anode of the picture to the chassis before handling the tube.
6. After servicing make the following leakage current checks to prevent the customer from being exposed to shock hazards.

LEAKAGE CURRENT COLD CHECK

1. Unplug the AC cord and connect a jumper between the two prongs of the plug.
2. Turn on the receiver's power switch.
3. Measure the resistance value with an ohmmeter, between the jumpered AC plug and each exposed metallic cabinet part on the receiver, such as screw heads, aerials, connectors, control shafts etc. When the exposed metallic part has a return path to the chassis the reading should be between 4M ohm and 20M ohm. When the exposed metal does not have a return path to the chassis the reading must be infinite.

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SICHERHEITSVORKEHRUNGEN**Allgemeine Richtlinien**

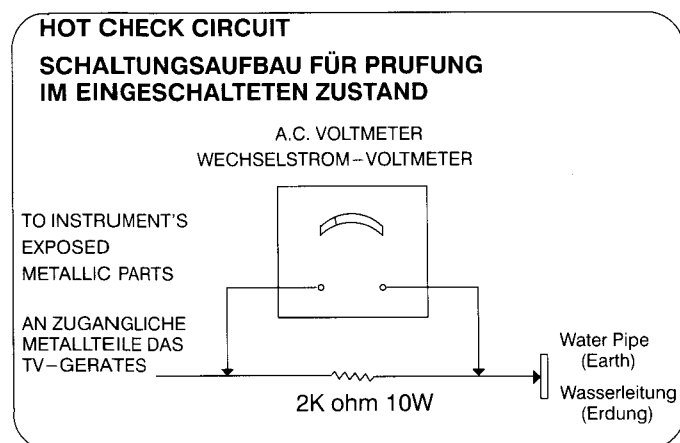
1. Es ist empfehlenswert einen Trenntransformator in die Stromversorgung zu schalten, bevor Reparaturen an einem Gerät vorgenommen werden, dessen Chassis unter Spannung steht.
2. Bei der Durchführung von Servicearbeiten dürfen die ursprünglichen Kabelanschlüssen nicht vertauscht werden. Dies gilt insbesondere für die Anschlüsse im Hochspannungsteil. Hat sich ein Kurzschluß ereignet, dann sind alle Teile, an denen Spuren von Überhitzung sichtbar sind, auszuwechseln.
3. Nach Beenden der Servicearbeiten ist sicherzustellen, daß alle Sicherheitsvorrichtungen, wie Isolationsstege, Isolationspapiere, Abschirmungen und Isolations-R-C-Glieder wieder richtig eingesetzt sind.
4. Wenn der Fernseher während längerer Zeit nicht in Betrieb gesetzt wird, sollte der Netzstecker aus der Netzsteckdose gezogen werden.
5. Im Betrieb sind Spannungen bis zu 30.0 kV in diesem Gerät vorhanden. Die Inbetriebnahme des Fernsehers ohne aufgesetzte Rückwand bringt die Gefahr eines elektrischen Schlages von der Fernseher - Stromversorgung mit sich. Servicearbeiten sollten daher auch nie durch Personen versucht werden, die nicht in vollem Umfang mit den Sicherheitsvorkehrungen beim Umgang mit Hochspannungsgeräten vertraut sind. Vor der Handhabung mit der Bildröhre ist die Anode der Bildröhre immer an dem Empfängerchassis zu entladen.
6. Nach Beenden der Servicearbeiten sind die folgenden Kriechstrom-Prüfungen durchzuführen, um den Kunden vor der Gefahr eines elektrischen Schlages zu schützen.

MESSUNG DES ISOLATIONSWIDERSTANDES IM ABGESCHALTETEN ZUSTAND

1. Den Netzstecker aus der Netzsteckdose ziehen und die beiden Steckerstifte kurzschließen.
2. Den Geräteschalter des Fernsehgerätes einschalten.
3. Mit einem Ohmmeter den Widerstandswert zwischen dem überbrückten Netzkabelstecker und jedem zugänglichen Metallteil am Gehäuse des Fernsehgerätes, wie Schraubenköpfe, Antennen, Achsen der Regler, Griffassungen usw. messen. Wenn ein zugängliches Metallteil keine Rückleitung zum Chassis hat, muß die Anzeige unendlich betragen.

LEAKAGE CURRENT HOT CHECK

1. Plug the AC cord directly into the AC outlet. Do not use an isolation transformer for this check.
2. Connect a 2k Ω 10W resistor in series with an exposed metallic part on the receiver and an earth such as a water pipe.
3. Use an AC voltmeter with high impedance to measure the potential across the resistor.
4. Check each exposed Metallic part and check the voltage at each point.
5. Reverse the AC plug at the outlet and repeat each of the above measurements.
6. The potential at any point should not exceed 1.4 Vrms. In case a measurement is outside the limits specified, there is a possibility of a shock hazard, and the receiver should be repaired and rechecked before it is returned to the customer.

**X-RADIATION WARNING**

1. The potential sources of X-Radiation in TV sets are the high voltage section and the picture tube.
2. When using a picture tube test jig for service ensure that the jig is capable of handling 30.0 kV without causing X-Radiation.

NOTE : It is important to use an accurate periodically calibrated high voltage meter

1. Set the brightness to minimum.
2. Measure the high voltage. The meter should indicate 29.0 kV \pm 0.7kV if the meter indication is out of tolerance, immediate service and correction is required to prevent the possibility of premature component failure.
3. To prevent any X-Radiation possibility, it is essential to use the specified tube.

MESSUNG DES KRIECHSTROMS IM EINGESCHALTETEN ZUSTAND

1. Den Netzstecker direkt in eine Netsteckdose stecken. Für diese Messung keinen Trenntransformator verwenden.
2. Einen 2k Ω / 10W-Widerstand in Serie mit einem von außen zugänglichen Metallteil am Fernsehgerät und einer guten, Erdung z.B Wasserleitung, anschließen.
3. Ein Wechselstrom-Voltmeter mit einem Meßbereich von 1000 Ohm.Volt oder größer verwenden, um die Spannung über den Widerstand zu messen.
4. Jedes zugängliche Metallteil prüfen, und an jedem Punkt dies Spannung messen.
5. Den Netzstecker umgekehrt in die Steckdose stecken und jede der obigen Messungen wiederholen.
6. Die Spannung darf an keinem der Punkte 1.4V eff. überschreiten. Wird dieser Wert nicht eingehalten, besteht die Gefahr eines elektrischen Schlages, und das Fernsehgerät sollte daher repariert und nachgeprüft werden, bevor es an den Kunden zurückgegeben wird.

RÖNTGENSTRAHLUNG**ACHTUNG :**

1. Potentielle Quellen von Röntgenstrahlung in Fernsehgeräten sind das Hochspannungsteil und die Bildröhre.
2. Bei Verwendung eines Bildröhren-Prüfgerätes für den Service ist sicherzustellen, daß es für die Belastung von 30.0 kV geeignet ist, ohne daß eine Röntgenstrahlung verursacht wird.

ANMERKUNG : Es ist wichtig, daß ein präzises, regelmäßig geprüftes Voltmeter verwendet wird.

1. Helligkeit auf Minimum stellen.
2. Die Hochspannung messen. Die Anzeige des Instrumentes sollte 29.0 kV \pm 0.7kV betragen. Falls die Anzeige diese Toleranzgrenzen überschreitet, ist die sofortige Behebung nötig, um die Möglichkeit vorzeitigen Komponentenausfalls zu verhüten.
3. Um die Möglichkeit von Röntgenstrahlung zu begrenzen, ist es wichtig, daß nur die vorgeschriebene Bildröhre verwendet wird.

Location Of Controls

Lage der Einstellregler

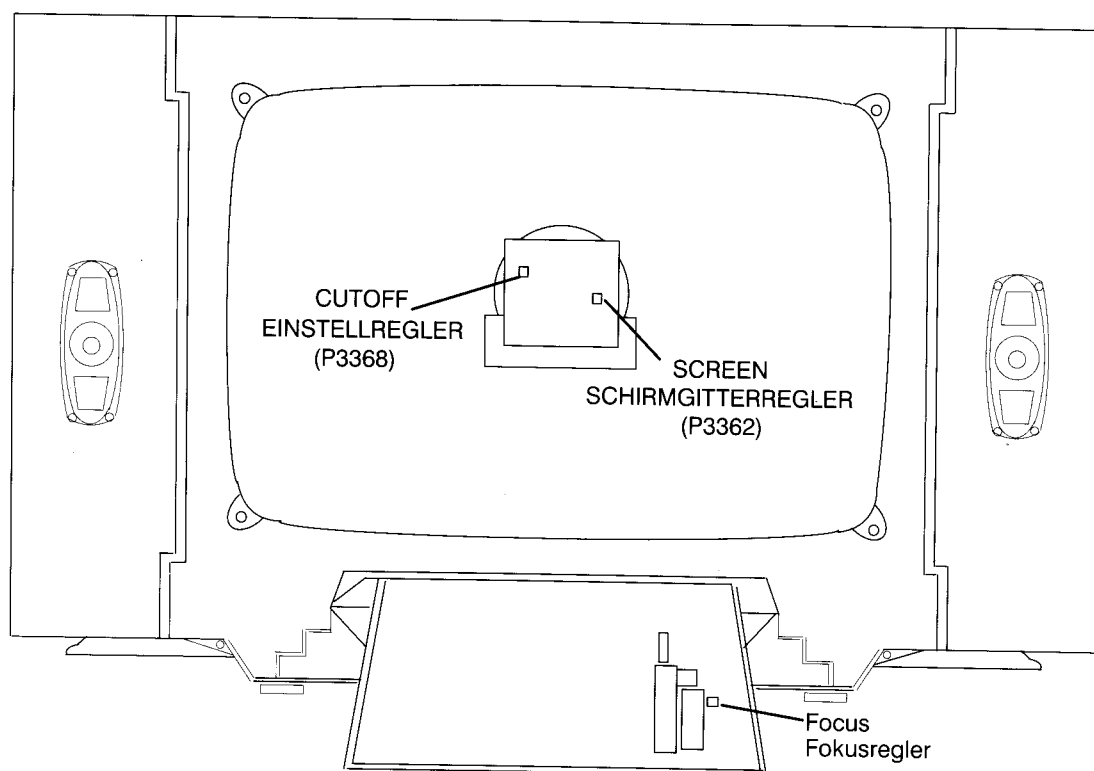


Fig.2
Abb.2

SERVICE HINTS

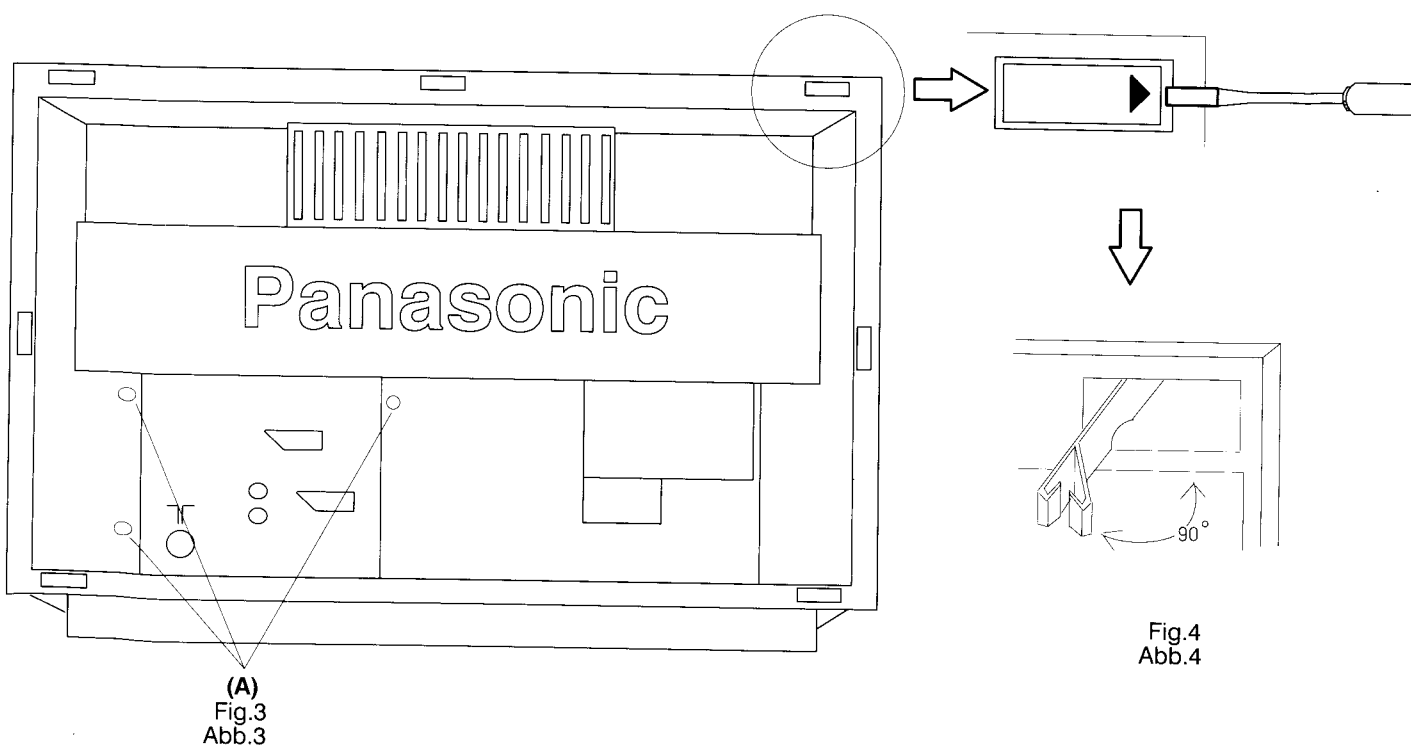
How to remove the rear cover

1. Remove the 3 screws (A) as shown in Fig.3.
2. Insert a flat blade screwdriver into the slot of each rear cover fixing clip and release the 7 rear cover fixing clips as shown in fig.4.

SERVICE HINWEISE

Entfernen Der Geräterückwand

1. Die 3 Schrauben (A) entfernen, siehe Abb.3.
2. Mit einem schmalen, flachen Schraubendreher die 7 Klammern der Rückwand öffnen, siehe Abb.4.

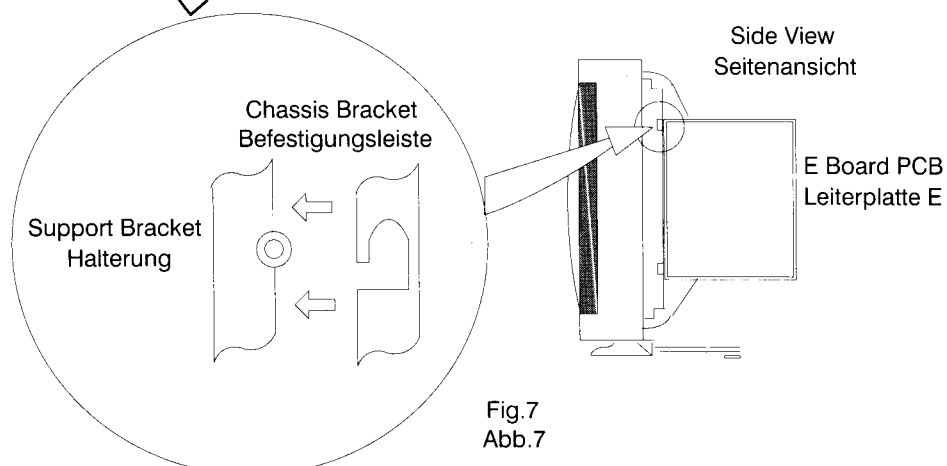
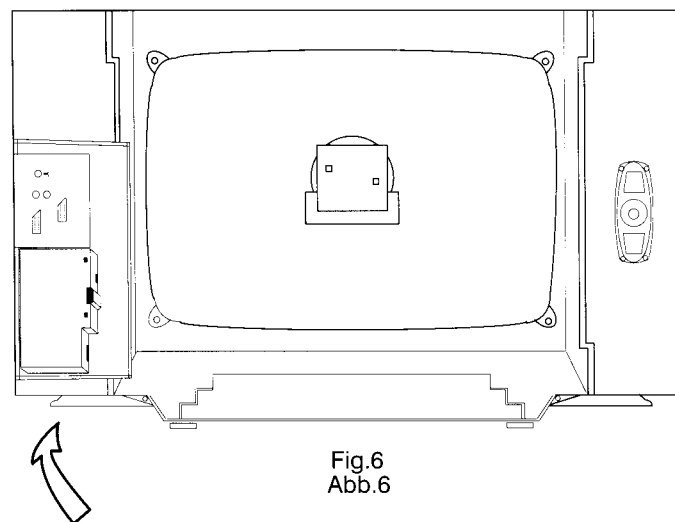
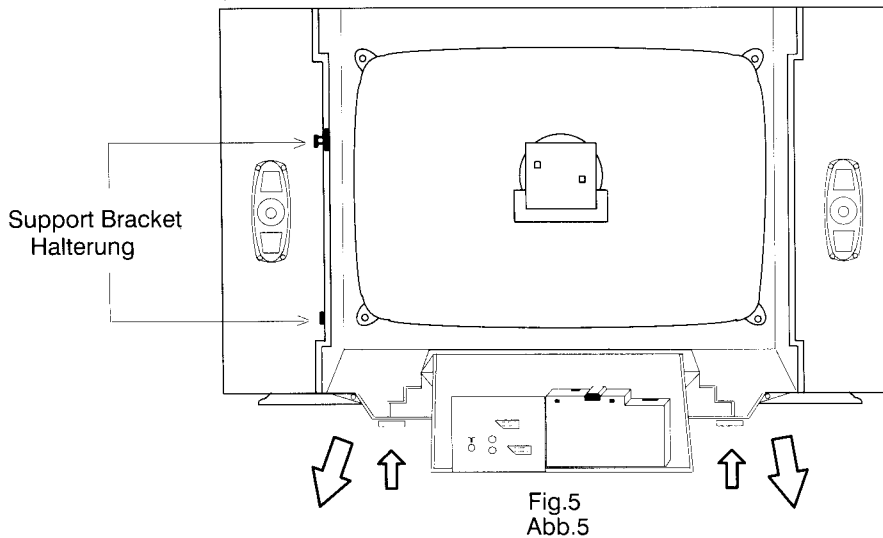


HOW TO MOVE THE CHASSIS INTO THE SERVICE POSITION

1. Hold and lift the rear of the E- PCB chassis as shown in Fig.5. and gently pull the chassis toward you.
2. Turn the chassis through 90° anti-clockwise as shown in Fig.6.
3. Clip the chassis bracket onto the support bracket as shown in Fig.7.
4. After servicing ensure all wiring is returned to its original position before returning the receiver to the customer.

GERÄTECHASSIS IN REPARATURSTELLUNG BRINGEN

1. Die Leiterplatte E wie in Abb.5 gezeigt hinten leicht anheben und vorsichtig nach hinten aus dem Gerät herausziehen.
2. Drehen Sie jetzt das Chassis um 90° entgegen dem Uhrzeiger in die Position wie in Abb.6 gezeigt.
3. Die Befestigungsleiste Geräterahmens wie in Abb.7 gezeigt in die seitliche Halterung einhängen.
4. Nach erfolgter Reparatur/Einstellung müssen die Leitungen wieder in ihre ursprüngliche Lage gebracht werden, bevor das FS-Gerät an den Kunden Übergeben wird.



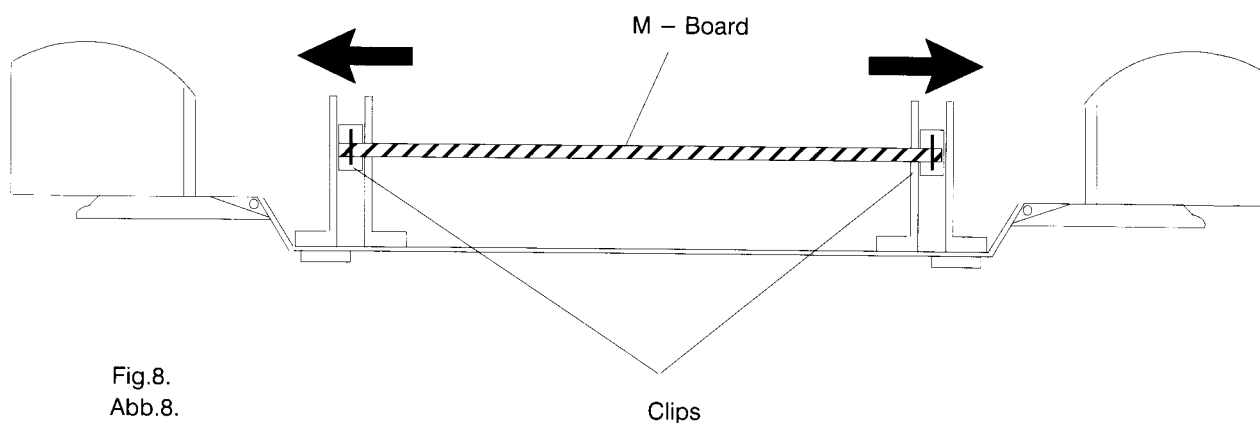
MC-Service

HOW TO REMOVE THE CONTROL PANEL (M BOARD)

1. Place the E board into the service position as shown in Fig.5.
2. Unclip the two plastic clips by pushing sideways in the direction of the arrows shown in Fig.8 and pull the M – board towards you, ensuring no leads are placed under stress.
3. After servicing ensure all wiring is returned to its original position before returning the receiver to the customer

AUS- UND EINBAUEN DES BEDIENFELDS SOWIE DER LEITERPLATTEN M

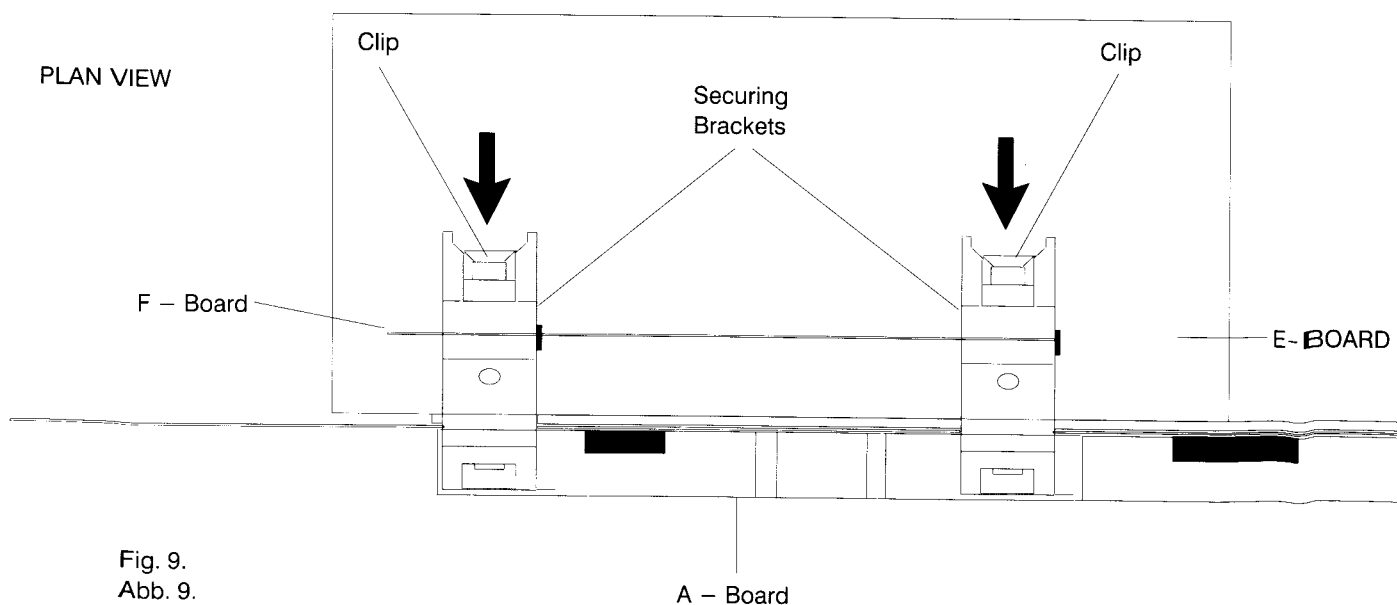
1. Die Leiterplatte E wie auf Seite 5 gezeigt in Reparaturstellung bringen.
2. Entriegeln Sie die beiden Plasticlips indem Sie diese seitwärts in Pfeilrichtung drücken (siehe Abb.8). Ziehen Sie jetzt das M – board in Ihre Richtung und achten Sie darauf, daß keine Kabel überdehnt werden.
3. Nach erfolgter Reparatur/Einstellung müssen sämtliche Kabel wieder in ihre ursprüngliche Lage gebracht werden, bevor das FS – Gerät an den Kunden Übergeben wird



HOW TO REMOVE THE A – BOARD

1. Disconnect the six leads from the A – board.
2. Release the A and F boards securing brackets by pushing the clips in the direction shown in Fig.9, and remove the A – board by gently lifting vertically.
3. After servicing ensure all wiring is returned to its original position before returning the receiver to the customer.

1. Lösen Sie die sechs Kabel vom A – board.
2. Danach lösen Sie jetzt die A – und F – Board Sicherungshalter indem Sie die Clips in die Richtung, welche in Abb.9 gezeigt ist, drücken und entfernen Sie das A – board indem Sie es vorsichtig vertikal anheben.
3. Nach Beendigung der Reparatur versichern Sie sich bitte, ob alle Kabel wieder in der richtigen Position sind.



Service position for the A – Board

1. Remove the A – board from the main chassis (E – board) as shown in Fig.9
2. Remove the two screws (A) (Fig.10) from the plastic AV cover and unclip the AV cover from the A – board (Fig. 11).
3. Unclip the front metal cover (fig.11) and remove from the A – board.
4. For ease of servicing remove the rear metal cover by desoldering (fig.12)
5. Fit the extension leads to the A – board making sure that the A – board does not touch the E – board (fig.13).
6. After servicing ensure all wiring is returned to its original position before returning the receiver to the customer.
Note : The extension lead wire kit is supplied as a service kit. (Part number TZS4EP001).

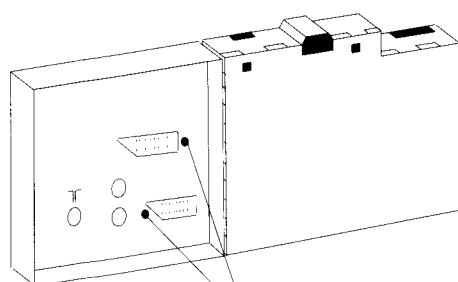


Fig. 10.
Abb. 10. Screws A

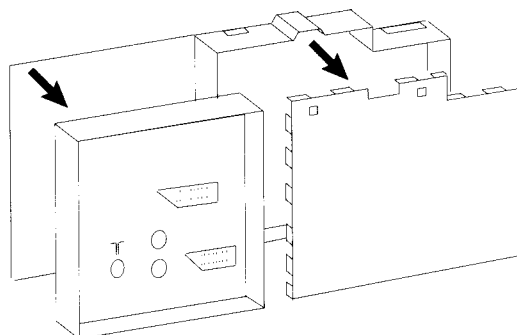


Fig. 11.
Abb. 11.

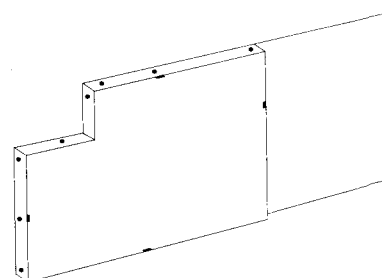


Fig. 12.
Abb. 12.

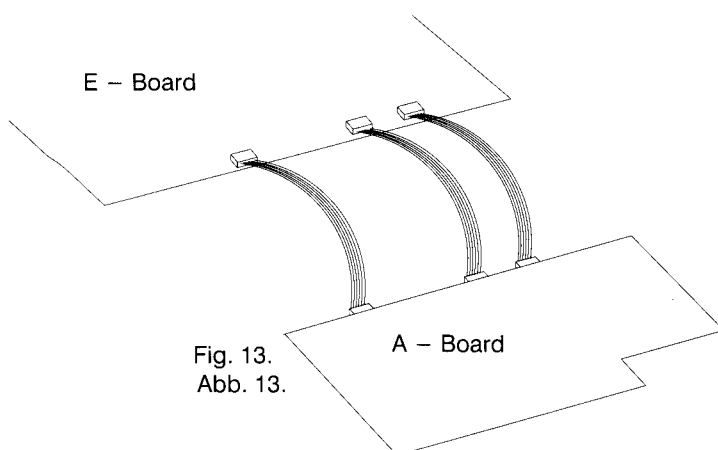


Fig. 13.
Abb. 13.

Reparaturstellung Für Leiterplatte A

1. Die Leiterplatte A vom Hauptchassis (Leiterplatte E) abnehmen; vorher müssen alle Anschlusskabel abgezogen werden.
2. Die beiden Schrauben A (Fig.10) aus der AV – Abdeckung aus Kunststoff heraus schrauben und die AV – Abdeckung durch Ausclippen von der Leiterplatte A abnehmen.
3. Die drei Metallclips B (Fig.10) von der Metallabdeckung entfernen.
4. Um die Reparatur zu erleichtern, entfernen Sie bitte die Metallabdeckung indem Sie diese vorher entlöten (Siehe Abb. 12)
5. Die sechs Verlängerungskabel an die Leiterplatte A anschliessen; darauf achten, daß die Leiterplatte A die Platine E nicht berührt (fig.13).
6. Nach erfolgter Reparatur/Einstellung müssen sämtliche Leitungen wieder in ihre ursprüngliche Lage gebracht werden, bevor das FS – Geräten den Kunden übergeben wird.

Hinweis : Die Verlängerungskabel werden als Reparatur – Teilesatz unter der Bestell – Nr TZS4EP001 geliefert.

Adjustment Procedure

Adjustment	Signal	Conditions	Adjustments	Settings/Special features
Operating voltage	Test pattern	230 V – beam current 0	Adjust P633	Measure Cathode D651 so a Voltmeter shows +150V \pm 0.5
Focus	Test pattern		Focus at line transformer	Optimum setting
RF AGC	Standard colour bar signal	Place an oscilloscope on tuner AGC	Adjust P4701 clockwise	Slowly turn P4701 anti-clockwise, set P4701 where the RF AGC voltage drops by 0.2V from maximum.

The remote control is used for entering and storing adjustments, with the exception of cut-off adjustments which must always be done prior to service adjustment. Perform adjustments in accordance with screen display. The display on the screen also specifies the CCU variants as well as the approx. setting values. Before you enter the service mode, set contrast to 44 and brightness to 22 and store each of these values. The adjustment sequence for the service mode is indicated below.

1. Set the Bass to maximum position, set the Treble to minimum position, press the Volume down on the customer controls at the front of the TV and at the same time press the Reset button on the remote control, this will place the TV into the Service Mode.
2. Press the RED / GREEN buttons to step up / down through the functions.
3. Press the YELLOW / BLUE buttons to alter the function values.
4. Press the STORE button on the preset panel after each adjustment has been made to store the required values.
5. To exit the Service Mode switch off the TV.

NOTE: This TV also has the option of using a Memory Pack which enables you to copy the preset TV channels into the Memory Pack and then download them onto this or any other EURO-2S TV set.

TV to Memory Pack process

1. Plug the memory pack into the lower of the two 21 pin terminals at the back of the TV and switch the TV on. If the TV has only one 21 pin connector then this will be able to accept the memory pack.
2. Go into the Service Mode as explained above. The screen will show: –

Program
External >> TV

3. Press the blue button on the remote control. The screen will show: –

Program
TV >> External

4. Press the STORE button on the TV. The screen will show: –

Storing

5. All the tuning information stored inside the TV will now be transferred to the Memory Pack. This process will take 2–3 minutes to complete and when finished the screen will show: –

OK!

Memory Pack to TV Process

1. Plug the memory pack into the lower of the two 21 pin terminals at the back of the TV and switch the TV on. If the TV has only one 21 pin connector then this will be able to accept the memory pack.
2. Go into the Service Mode as explained above. The screen will show: –

Program
External >> TV

3. Press the STORE button on the TV. The screen will show: –

Loading

4. All the tuning information stored inside the Memory Pack will now be transferred to the TV. This process will take 2–3 minutes to complete and when finished the screen will show: –

OK!

5. The tuning information from the Memory Pack has now been copied into the TV
6. To exit from the Service Mode switch off the TV.
7. The process has now been completed and the Memory Pack can now be removed.

Errors

If an error occurs while using the Memory Pack the TV will detect this and the screen will show: –

Program
Error!

If this happens then switch off the TV and then repeat the process that was being used. If the errors continue to occur then check the connectors between the TV and the memory pack and check the 9V battery inside the memory pack.

ABGLEICHVERFAHREN

Abgleich	Signal	Bedingungen	Einstellung	Einstellung / Bes. Merkmale
Betriebsspannung	Testbild	230 V – Strahlstrom 0	P633 abgleichen	Mit einem Voltmeter an der Katode von D651 +150V \pm 0.5 einstellen
Fokus	Testbild		Am Zeilentrafo fokussieren	Optimale Einstellung
HF – Regelspannung	Farbbalkentestbild	Einen Oszillograph (DC – Modus) an Pin 4 vom Tuner an die AGC anschliessen	Regler P4701 auf Rechtsanschlag	P4701 langsam gegen den Uhrzeigersinn drehen, bis die AGC – Spannung um 0.2V vom Maximum absinkt.

Die Fernbedienung dient zum Eingeben und Abspeichern der Einstellwerte, mit Ausnahme der Sperrpunkteinstellung, die grundsätzlich vor den hier beschriebenen Einstellungen vorgenommen werden muss. Die Einstellung erfolgt entsprechend dem Bildschirm – Display. Auf dem Bildschirm – Display erscheinen auch die CCU – Varianten sowie die ungefähren Einstellwerte. Vor dem Umschalten auf Service – Modus muss der Kontrast auf 44 und die Helligkeit auf 22 eingestellt werden, und diese Werte sind abzuspeichern. Die Einstellfolge für den Service – Modus ist nachstehend beschrieben.

- Den Tiefenregler auf Höchststellung und den Höhenregler auf Mindeststellung stellen. Die Taste "Lautstärke Minus" am Bedienfeld vorne am FS – Gerät drücken und gleichzeitig die Taste "Reset" an der Fernbedienung betätigen. Hierdurch wird das FS – Gerät auf Service – Modus geschaltet.
- Die einzelnen Funktionen mit Hilfe der ROTEN und GRÜNEN Taste anwählen.
- Mit der GELBEN und BLAUEN Taste die Werte der einzelnen Funktionen ändern.
- Nach jeder Einstellung die Taste STORE am Bedienfeld drücken, um die gewünschten Werte abzuspeichern.
- Zum Verlassen des Service – Modus das FS – Gerät abschalten.

HINWEIS: Dieses FS – Gerät bietet auch die Möglichkeit eines Memory Pack, mit dem Sie die gewählten Fernsehkanäle abspeichern und auf jedes beliebige EURO2S FS – Gerät umkopieren können.

Kopieren der Einstelldaten vom FS – Gerät in das Memory Pack

- Das Memory Pack in die untere der beiden 21 – poligen Steckerleisten an der Rückseite des FS – Geräts stecken und das Gerät einschalten. Wenn das FS – Gerät nur eine 21 – polige Anschlussleiste hat, kann das Memory Pack auch an diese angeschlossen werden.
- Wie schon oben beschrieben auf Service – Modus umschalten. Auf dem Bildschirm erscheint:

Program
External >> TV

- Nun die blaue Taste an der Fernbedienung betätigen. Auf dem Bildschirm erscheint:

Program
TV >> External

- Die Taste STORE am Fernseher drücken. Der Bildschirm meldet nun:

Storing

- Die im FS – Gerät abgespeicherten Kanal – Einstelldaten werden nun in das Memory Pack überspielt. Dieser Prozess nimmt zwei bis drei Minuten in Anspruch; bei abgeschlossener Datenübertragung meldet der Bildschirm:

OK!

Kopieren der Einstelldaten vom Memory Pack in das FS – Gerät

- Das Memory Pack in die untere der beiden 21 – poligen Steckerleisten an der Rückseite des FS – Geräts stecken und das Gerät einschalten. Wenn das FS – Gerät nur eine 21 – polige Anschlussleiste hat, kann das Memory Pack auch an diese angeschlossen werden.
- Wie schon oben beschrieben auf Service – Modus umschalten. Auf dem Bildschirm erscheint:

Program
External >> TV

- Die Taste STORE am Fernseher drücken. Der Bildschirm meldet nun:

Loading

- Die im Memory Pack abgespeicherten Einstelldaten werden nun in das FS – Gerät überspielt. Dieser Prozess nimmt zwei bis drei Minuten in Anspruch; bei abgeschlossener Datenübertragung meldet der Bildschirm:

OK!

- Die Kanal – Einstelldaten sind damit vom Memory Pack in das FS – Gerät überspielt.
- Zum Verlassen des Service – Modus das FS – Gerät abschalten
- Der Kopiervorgang ist somit abgeschlossen, und das Memory Pack kann von der Steckerleiste abgezogen werden.

Fehler

Falls bei Gebrauch des Memory Pack Fehler auftreten, zeigt das FS – Gerät dies auf dem Bildschirm mit der folgenden Meldung an:

Program
Error!

In diesem Fall muss das FS – Gerät abgeschaltet und anschliessend der Vorgang wiederholt werden. Falls weiterhin Fehlermeldungen erscheinen, müssen die Anschlusskontakte zwischen FS – Gerät und Memory Pack sowie die 9V Batterie im Memory Pack kontrolliert werden.

Alignment Settings (The figures used below are nominal and used for representative purposes only)

Alignment Function	Display	Settings / Special features
1. Vertical amplitude	V-AMP 154 Amplitude 154	Optimum setting
2. Vertical symmetry	V-SYM 018 Symmetry 018	
3. Vertical linearity	V-LIN 015 Linearity 015	
4. Vert. DC	Vert. D.C. 015	
5. V-Pos	V. Pos. 015	
6. Horizontal amplitude	H-AMP 055 Amplitude 055	Optimum setting
7. Horizontal position	H-POS 002 Position 002	
8. Text Position	TEXT POSITION 048 Position 048	
9. EW-amplitude	E-W-AMP 1 106 EW-Ampl.1 106	
10. EW-amplitude	E-W-AMP 2 037 EW-Amp.2 037	Optimum setting
11 Trapezium-comp	TRAPEZ-1 144 Trapez1 144	Optimum setting
12. Trapezium-comp	TRAPEZ-2 034 Trapez2 034	
13. Colour VCO	Colour VCO 034	
14. Cut-off DC	Cut-off DC 028 Cut-off DC 028	
15. Ug2 Test	Ug 2 Test 040 007 010	Press the GREEN button to step through the settings. Adjust for optimum.
16. Cutoff	Cutoff 052 061 040	Press the GREEN button to step through the settings. Adjust for optimum.
17. White	White 205 218 255	Press the GREEN button to step through the settings. Adjust for optimum.

Abgleichtabelle

Abgleichfunktion	Display	Einstellung/Besondere Merkmale
1. Vertikale Amplitude	V-AMP 154 Amplitude 154	Optimale Einstellung
2. Vertikale Symmetrie	V-SYM 018 Symmetry 018	
3. Vertikale Linearität	V-LIN 015 Linearity 015	
4. Vert. DC	Vert. D.C. 015	
5. V-Pos	V. Pos. 015	
6. Horizontale Amplitude	H-AMP 055 Amplitude 055	Optimale Einstellung
7. Horizontale Position	H-POS 002 Position 002	
8. Text Position	TEXT POSITION 048 Position 048	
9. OW-Amplitude	E-W-AMP 1 106 EW-Ampl.1 106	Optimale Einstellung
10. OW-Amplitude	E-W-AMP 2 037 EW-Ampl.2 037	Optimale Einstellung
11 Trapez-Kompensation	TRAPEZ-1 144 Trapez1 144	Optimale Einstellung
12. Trapez-Kompensation	TRAPEZ-2 034 Trapez2 034	Optimale Einstellung
13. Colour VCO	Colour VCO 034	
14. Cut-off DC	Cut-off DC 028 Cut-off DC 028	
15. Bildschirm	Ug2 Test 040 007 010	
16. Cutoff	Cutoff 052 061 040	Die Einstellungen mit Hilfe der GRÜNEN Taste anwählen.Optimale Einstellung
17. White	White 205 218 255	Die Einstellungen mit Hilfe der GRÜNEN Taste anwählen.Optimale Einstellung

Integrated Circuit Information

MCU	Master Clock Unit
VDU	Video Display Unit
DFU	Digital Feature Unit
ACVP	Adaptive Comb and Video Processor
DPU	Deflection Processing Unit
SPU	SECAM Processing Unit
DTI	Digital Transient Improvement
SAD	S.VHS Analogue / Digital Converter
TPU	Teletext Processor Unit
CCU	Central Control Unit
ACP	Audio Control Processor

Service-Mode der Festspeicherdaten

MCU	Master Clock Einheit
VDU	Video Anzeige / Einblendungs Einheit
DFU	Digital Prozessor Einheit (CTI+LTI)
ACVP	Comb-Filter und Videoprozessor
DPU	Ablenkstufen Prozessor Einheit
SPU	SECAM Prozessor Einheit
DTI	Digitale Kantenschärfen Verbesserung
SAD	S.VHS Analog / Digital Umwandler
TPU	Videotext Prozessor Einheit
CCU	Zentralcomputer Kontroll Einheit
ACP	Audio Kontroll Prozessor

SELF CHECK

Self check is used to automatically check the Bus Lines and Hexadecimal code of the TV set.

To get into the Self Check mode press Volume down button, on the Preset Panel, at the same time pressing the Status button, on the Remote Control, and the screen will show: -

1 — ok	Tuner	11 — — —	Dolby IC for C/R
2 — ok	VIF	12 — ok	P S MODE
3 — ok	EEPROM	13 — ok	P TA0
4 — ok	Sound AV switch1	14 — ok	P TA1
5 — ok	Video AV switch1	15 — ok	P TA2
6 — ok	VDP	16 — ok	P TA3
7 — ok	TPU	17 — ok	P SDA
8 — ok	MSP	18 — ok	P SCL1
9 — — —	Dolby Sub	19 — ok	P SCL3
10 — — —	Dolby IC for L/R	20 — ok	P SCL4

If the CCU ports have been checked and found to be incorrect then "—", will appear in place of "OK".

21 — ok	P SBLED	04	Hex codes
22 — ok	P OFF	CC	
23 — ok	P DEFL	04	
24 — ok	P RAM	B4	

SELBSTDIAGNOSE

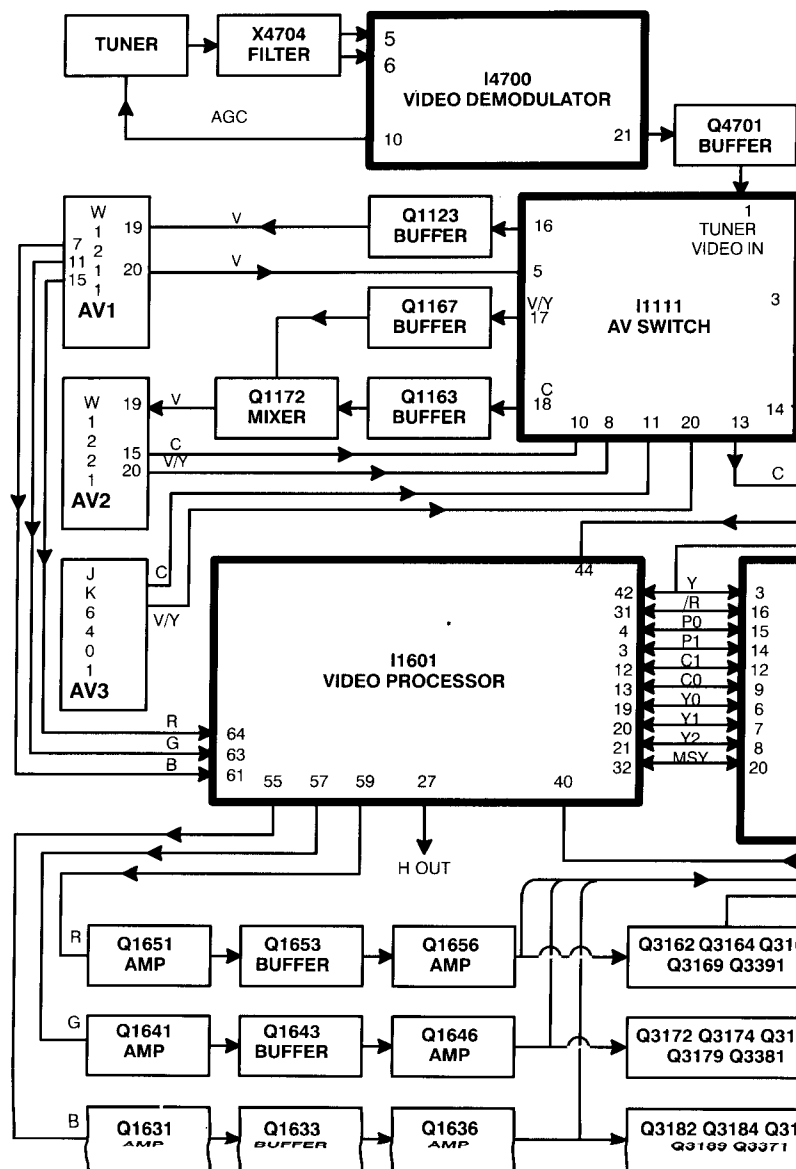
Die Selbstdiagnose dient zum automatischen Prüfen der Bus-Leitungen sowie des Hexadezimalcodes des FS-Geräts. Zum Umschalten auf Selbstdiagnose die Taste "Lautstärke Minus" am Bedienfeld des Geräts und gleichzeitig die Taste "Status" an der Fernbedienung drücken; auf dem Bildschirm erscheint hierauf: -

1 — ok	Tuner	11 — — —	Dolby IC for C/R
2 — ok	ZF-Verstärker	12 — ok	P S MODE
3 — ok	EEPROM	13 — ok	P TA0
4 — ok	Audio AV-Schalter 1	14 — ok	P TA1
5 — ok	Video AV switch1	15 — ok	P TA2
6 — ok	Video AV-Schalter 1	16 — ok	P TA3
7 — ok	Video AV-Schalter 2	17 — ok	P SDA
8 — ok	MSP	18 — ok	P SCL1
9 — — —	Dolby Sub	19 — ok	P SCL3
10 — — —	Dolby IC for L/R	20 — ok	P SCL4

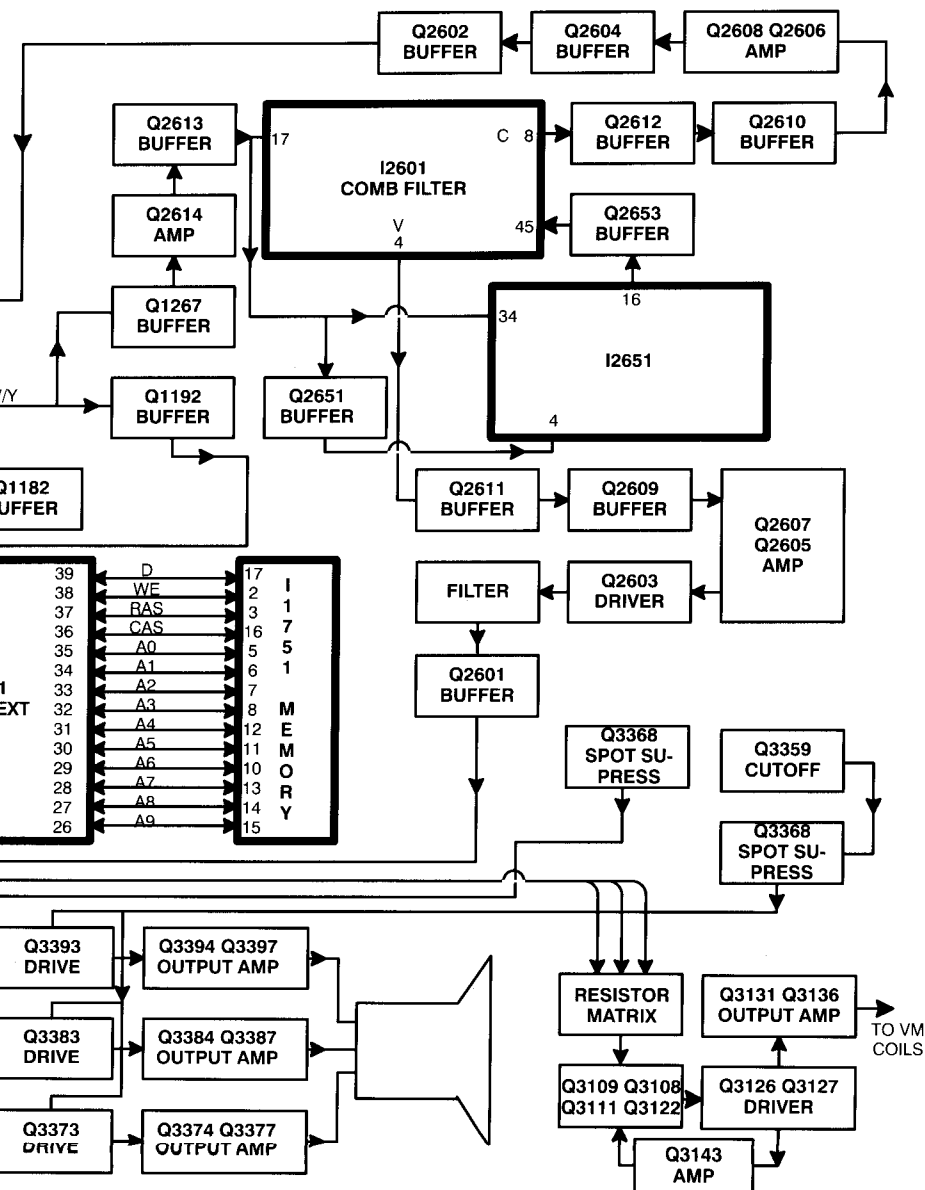
Wenn der Hauptprozessor (CCU) an den Anschlüssen einen Fehler finden sollte, oder der Anschluss nicht belegt ist, zeigt die entsprechende Position — anstelle von OK an.

21 — ok	P SBLED	04	Hexadezimalcode
22 — ok	P OFF	CC	
23 — ok	P DEFL	04	
24 — ok	P RAM	B4	

VIDEO BLOCK DIAGRAM

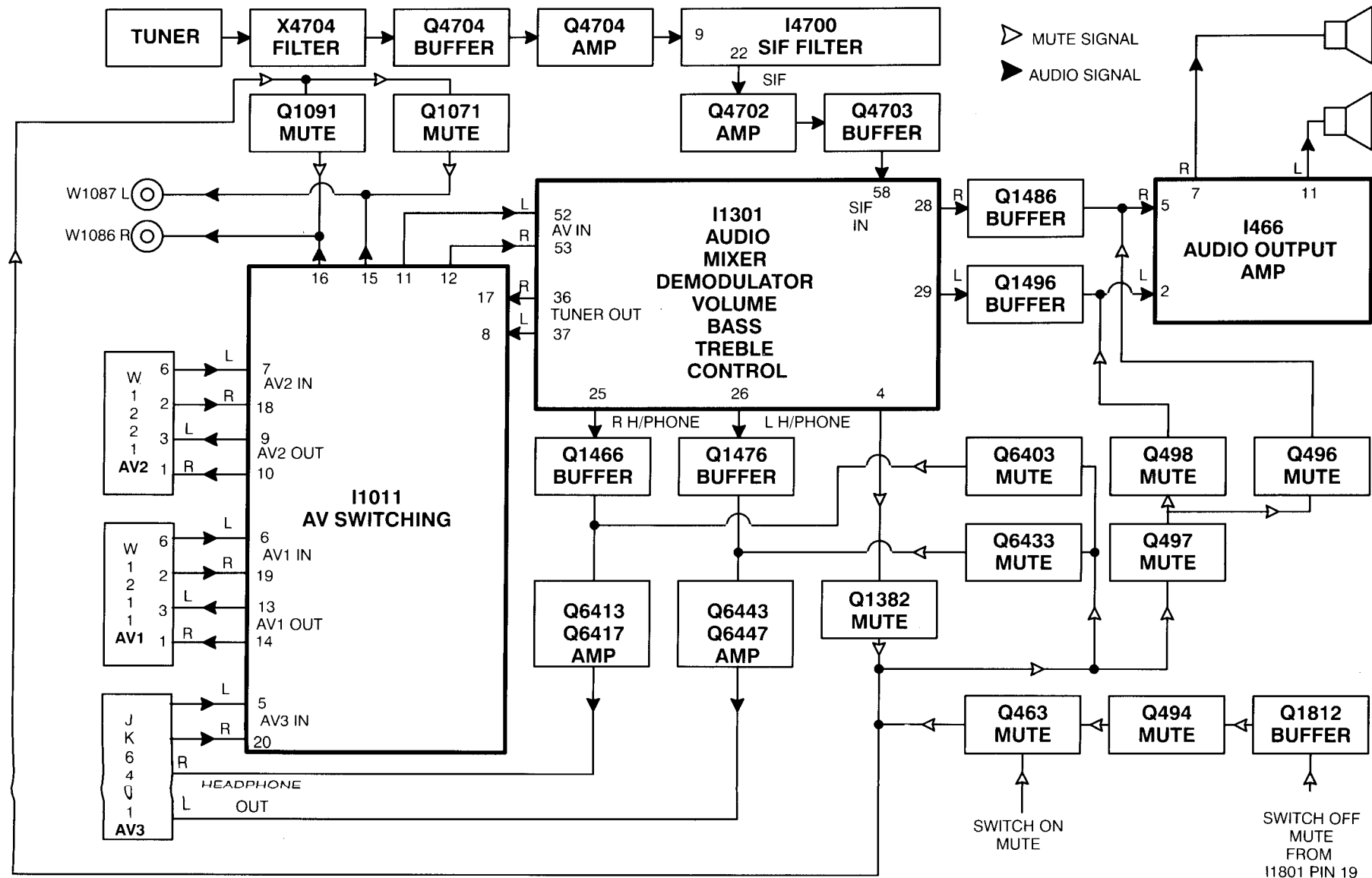


BILDSIGNAL BLOCKSCHEMA



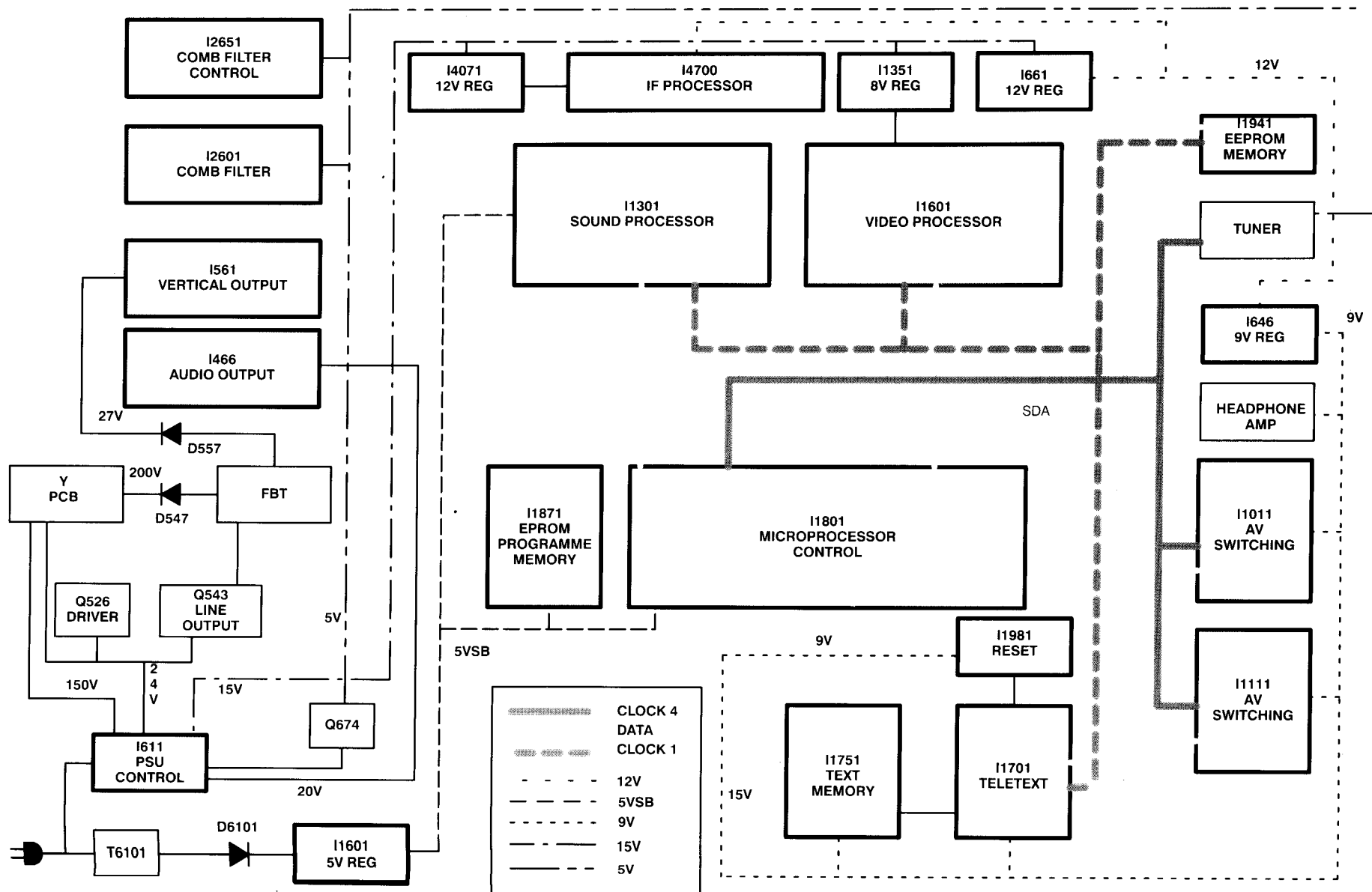
AUDIO BLOCK DIAGRAM

TONSIGNAL BLOCKSCHEMA



POWER SUPPLY BLOCK DIAGRAM

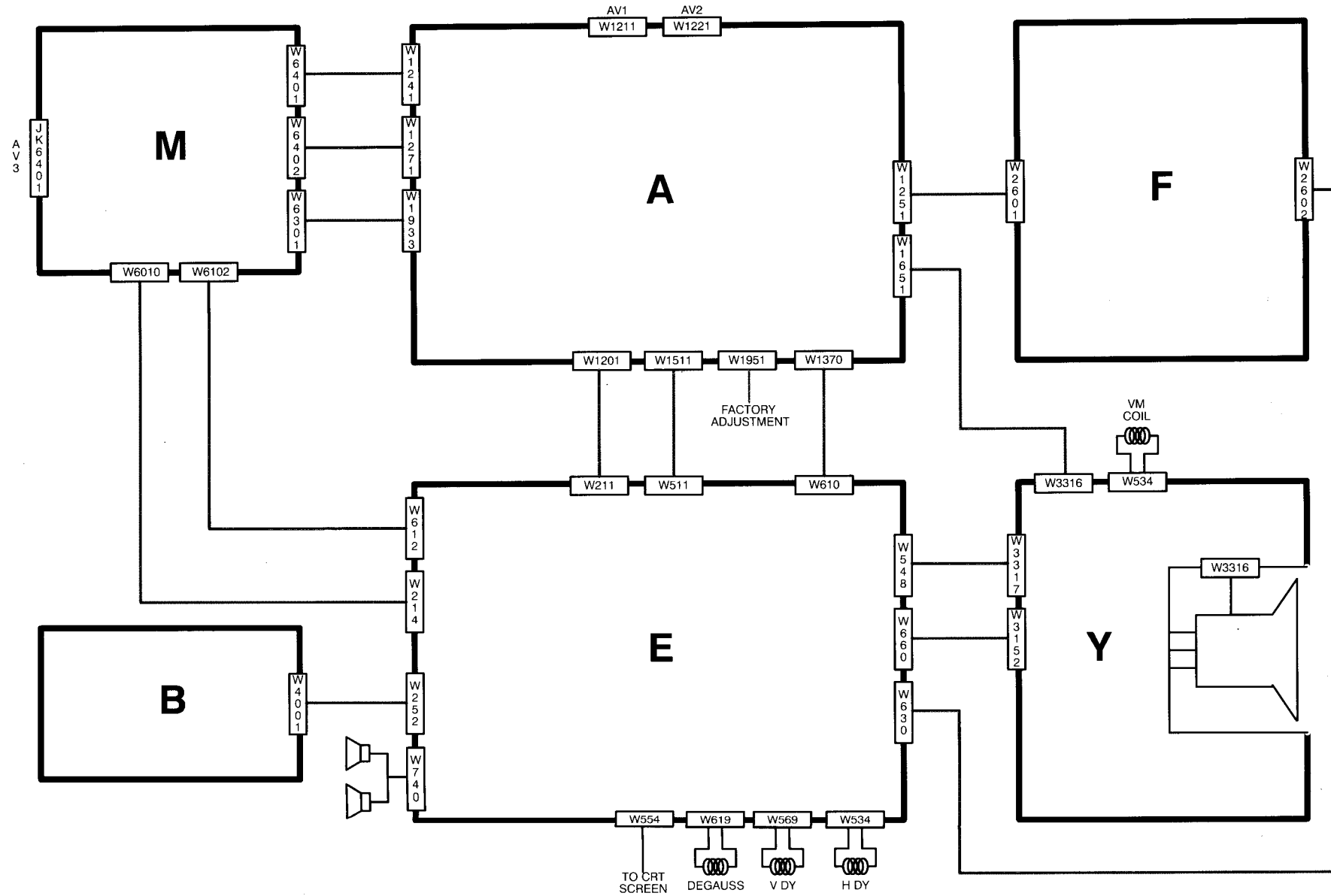
STROMVERSORGUNGS BLOCKSCHEMA



MC-Service

WIRING BLOCK DIAGRAM

BLOCKDIAGRAM DER KABELVERBINDUNG



PARTS LOCATION

Y-BOARD			
TRANSISTORS		DIODES	
Q108	B1	D126	B1
Q109	B1	D127	B1
Q111	B1	D133	D1
Q122	B1	D138	C1
Q126	B1	D352	A2
Q127	B1	D353	A2
Q131	C1	D356	A2
Q136	C1	D358	A2
Q143	B1	D368	A3
Q162	A1	D372	A3
Q166	A2	D373	C3
Q169	A2	D374	C3
Q176	A2	D377	C3
Q179	B2	D382	A3
Q182	A1	D383	A3
Q184	A1	D384	B3
Q186	A2	D387	B3
Q189	A2	D391	A2
Q357	B2	D392	A3
Q359	A3	D393	B3
Q368	A3	D394	C3
Q373	C4	D397	C3
Q374	D4		
Q377	D3		
Q381	A3		
Q383	B3		
Q384	B3		
Q387	B3		
Q391	B3		
Q392	A2		
Q393	B3		
Q394	C3		
Q397	C3		

CONDUCTOR VIEWS

ANSICHT DER LEITERBAHNEN

CRT BOARD BILDROHR - SVM - PLATTE

TNP117037AE

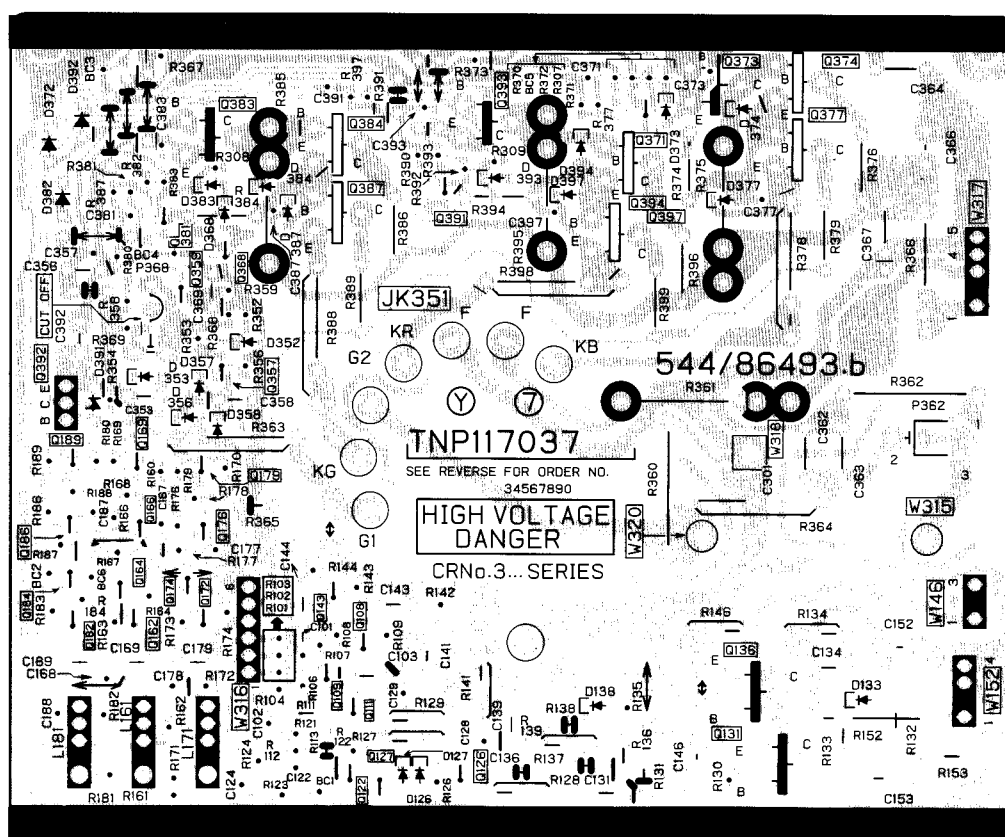
MC-Service

4

3

2

1



A

B

C

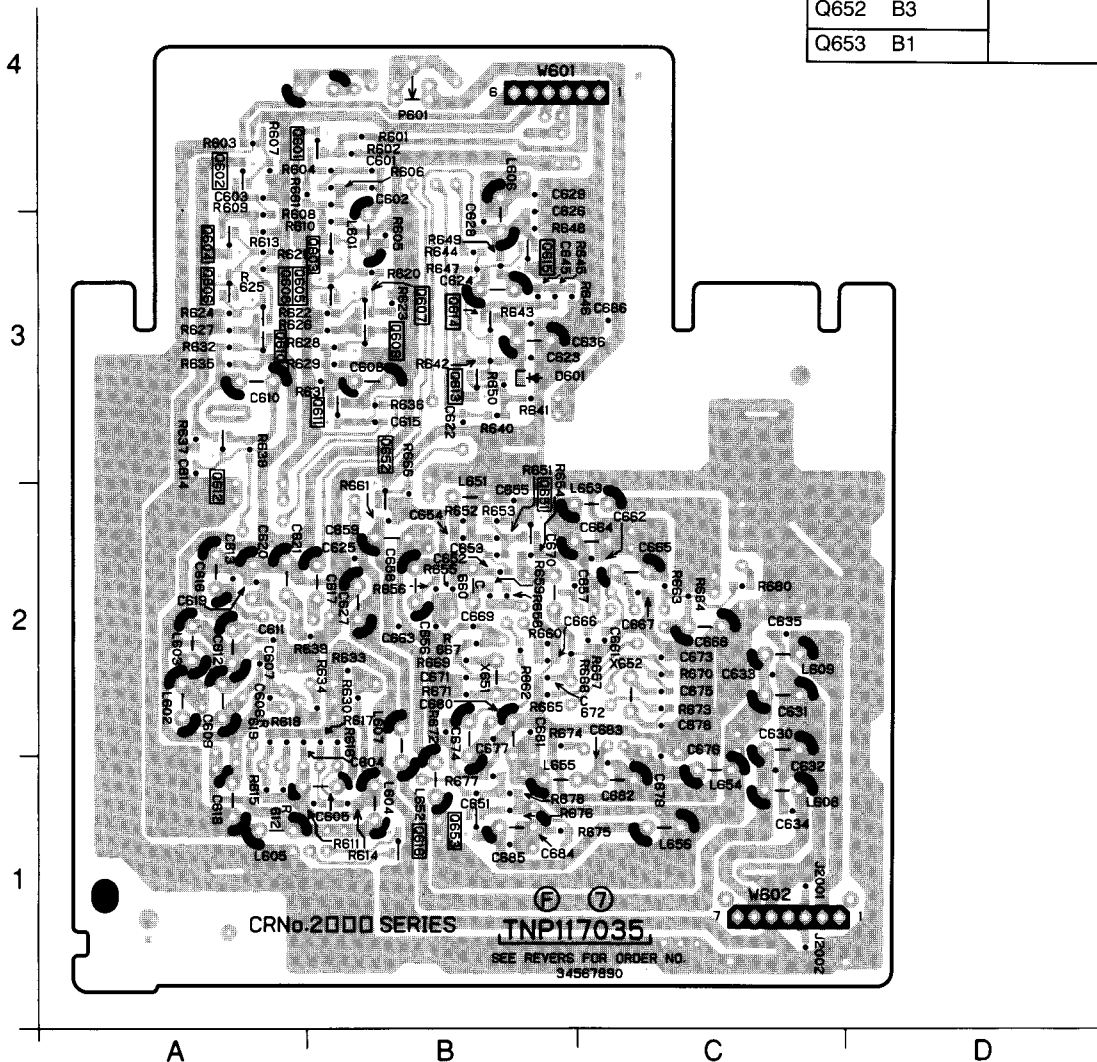
D

COMBFILTER COMBIFILTER

TNP117035AA

PARTS LOCATION

F-BOARD			
TRANSISTORS		DIODES	
Q601	A4	D601	B3
Q602	A4		
Q603	B3		
Q604	A3		
Q605	B3		
Q606	A3		
Q607	B3		
Q608	A3		
Q609	B3		
Q610	A3		
Q611	B3		
Q612	A3		
Q613	B3		
Q614	B3		
Q615	B3		
Q616	B1		
Q651	B2		
Q652	B3		
Q653	B1		



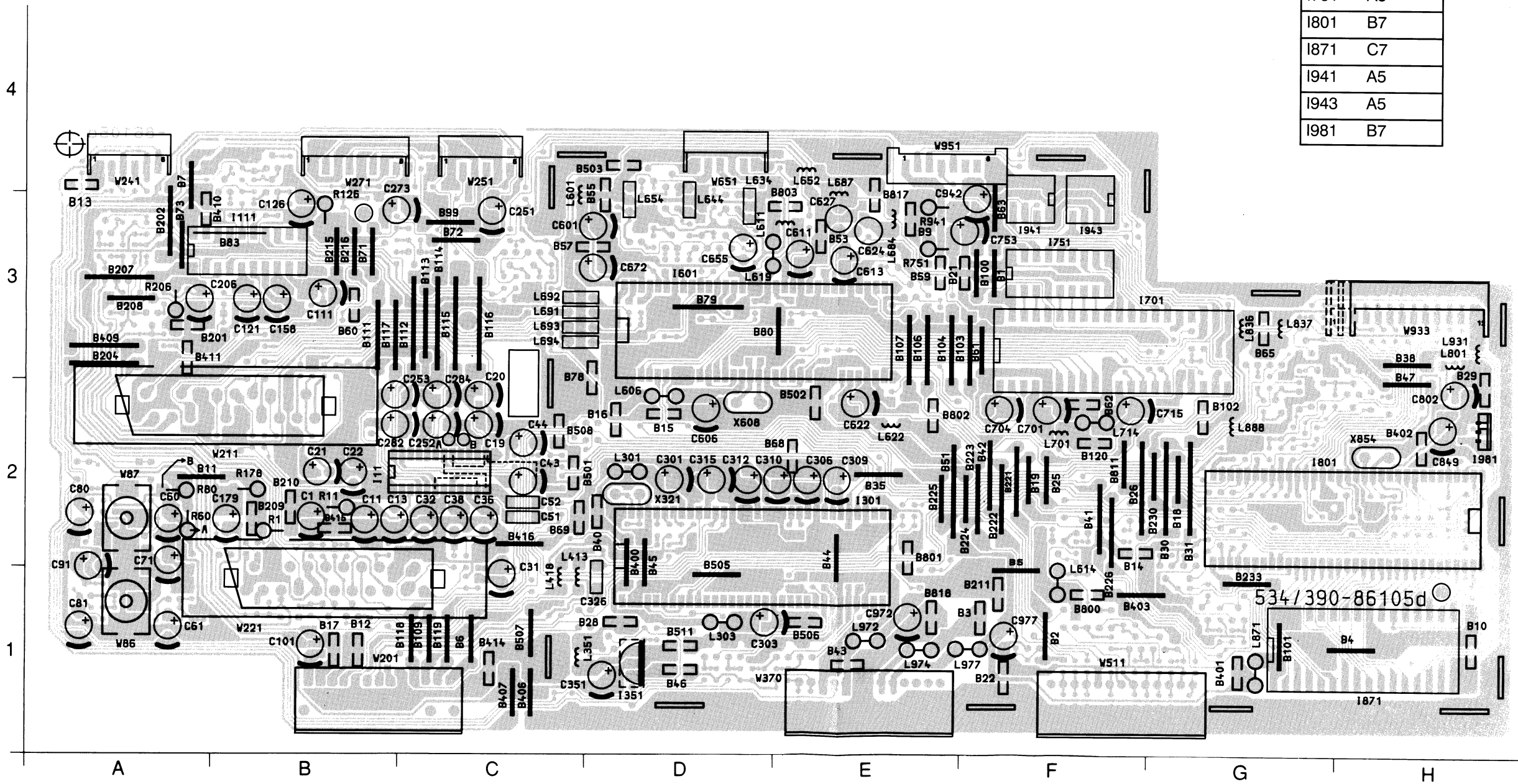
MC-Service

DIGITAL BOARD DIGITAL EINHEIT

396-86105.454

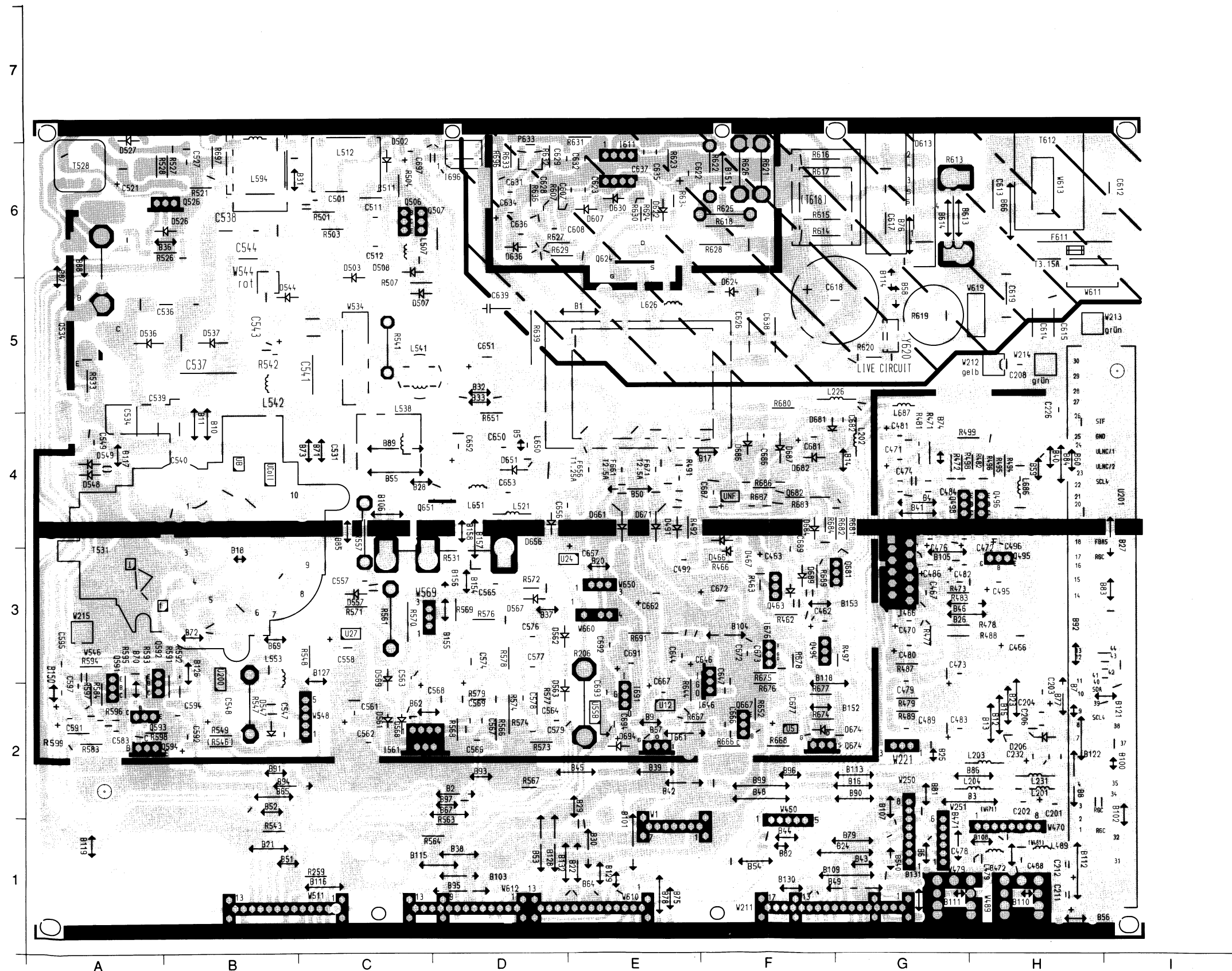
PARTS LOCATION

A – BOARD	
I.C.'S	
I11	B2
I111	A2
I301	C4
I351	C3
I601	B4
I701	B5
I751	A5
I801	B7
I871	C7
I941	A5
I943	A5
I981	B7



CHASSIS

396-86107.451



PARTS LOCATION WD1C

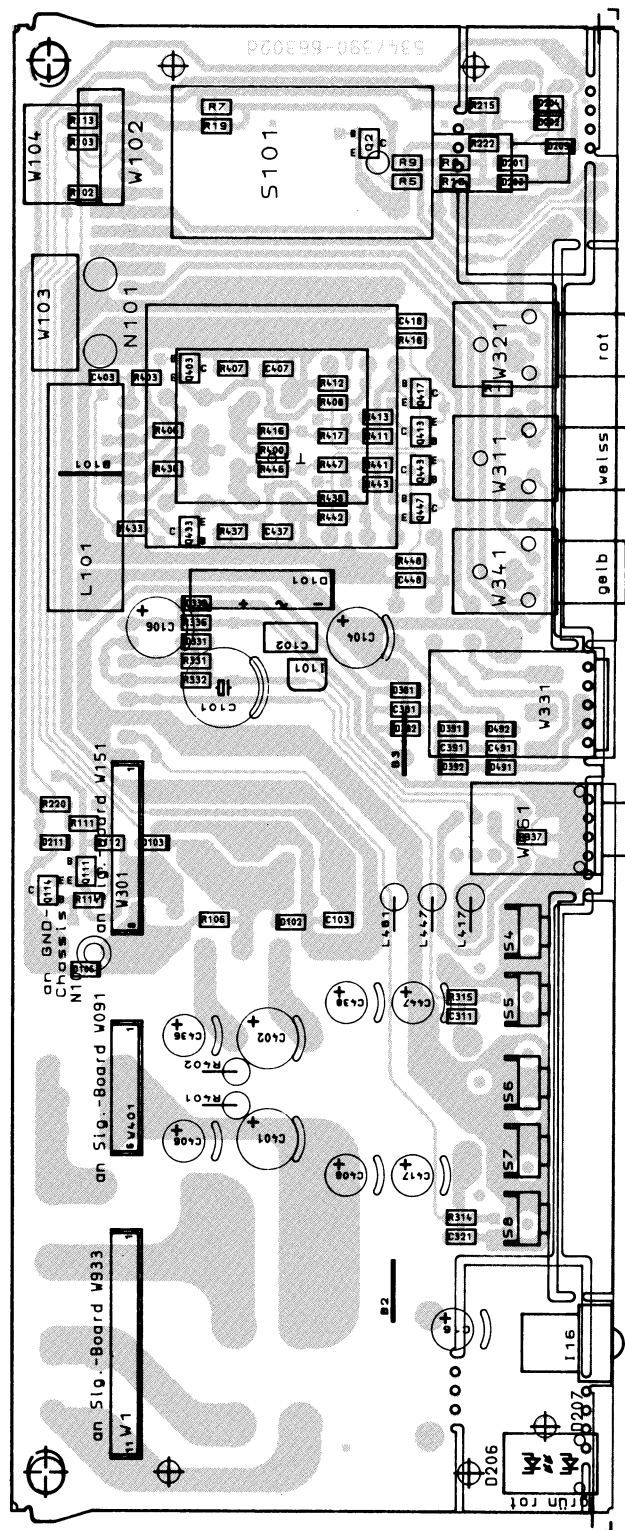
E – BOARD					
TRANSISTORS		DIODES		I.C.'S	
Q463	F3	D206	H2	I611	E6
Q494	F3	D466	F3	I646	F2
Q495	H3	D467	F4	I661	E2
Q496	H4	D491	E4	I676	F3
Q498	H4	D502	C6	I691	E2
Q506	C6	D503	C6		
Q507	C6	D507	C5		
Q526	B6	D508	C6		
Q591	A2	D526	B6		
Q592	A2	D527	A6		
Q593	A2	D536	A5		
Q594	A2	D537	B5		
Q624	E6	D544	B5		
Q651	D4	D547	B2		
Q667	F2	D548	A4		
Q674	F2	D549	A4		
Q681	G3	D557	C3		
		D561	C2		
		D562	D3		
		D563	D2		
		D567	D3		
		D568	C2		
		D569	C3		
		D607	E6		
		D622	E6		
		D624	F5		
		D630	E6		
		D636	D6		
		D651	D4		
		D656	D4		
		D661	E4		
		D671	E4		
		D674	F2		
		D681	G4		
		D682	F4		
		D684	F4		
		D686	F4		
		D687	F4		
		D689	F3		
		D694	E2		

CONTROL BOARD BEDIENPLATTE

396-86302.051

TRANSISTORS	M-B, ID
Q114 - C3	DIODES
Q111 - C3	D206 - A2
Q447 - E2	D207 - A1
Q443 - E2	D211 - C3
Q413 - E2	D106 - C3
Q417 - E2	D103 - C3
Q403 - E3	D102 - C2
Q2 - F2	D391 - D2
	D392 - D2
	D491 - D2
	D492 - D2
	D381 - D2
	D382 - D2
	D331 - D3
	D336 - D3
	D203 - F2
	D201 - F2

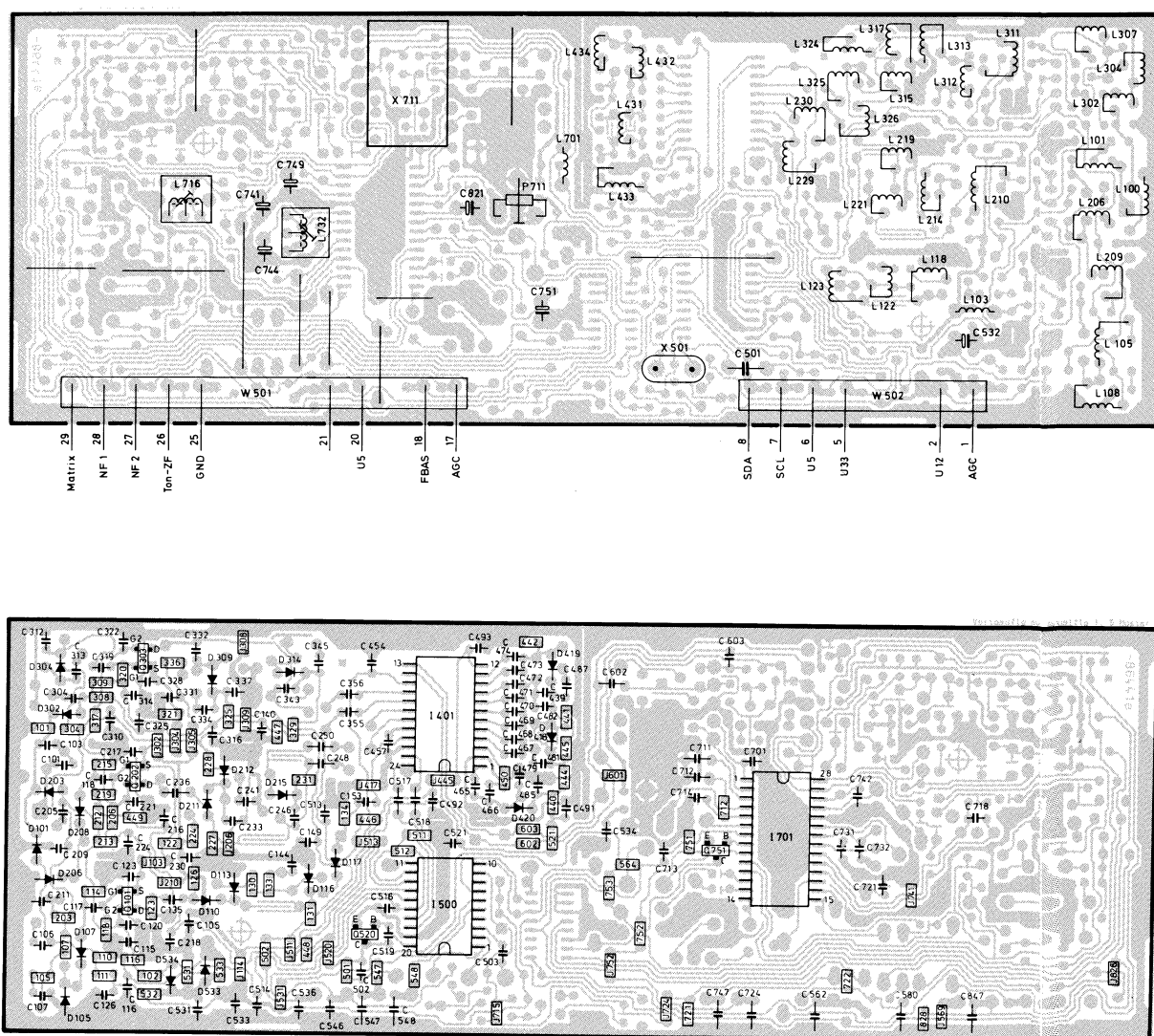
MC-Service



260-86530050

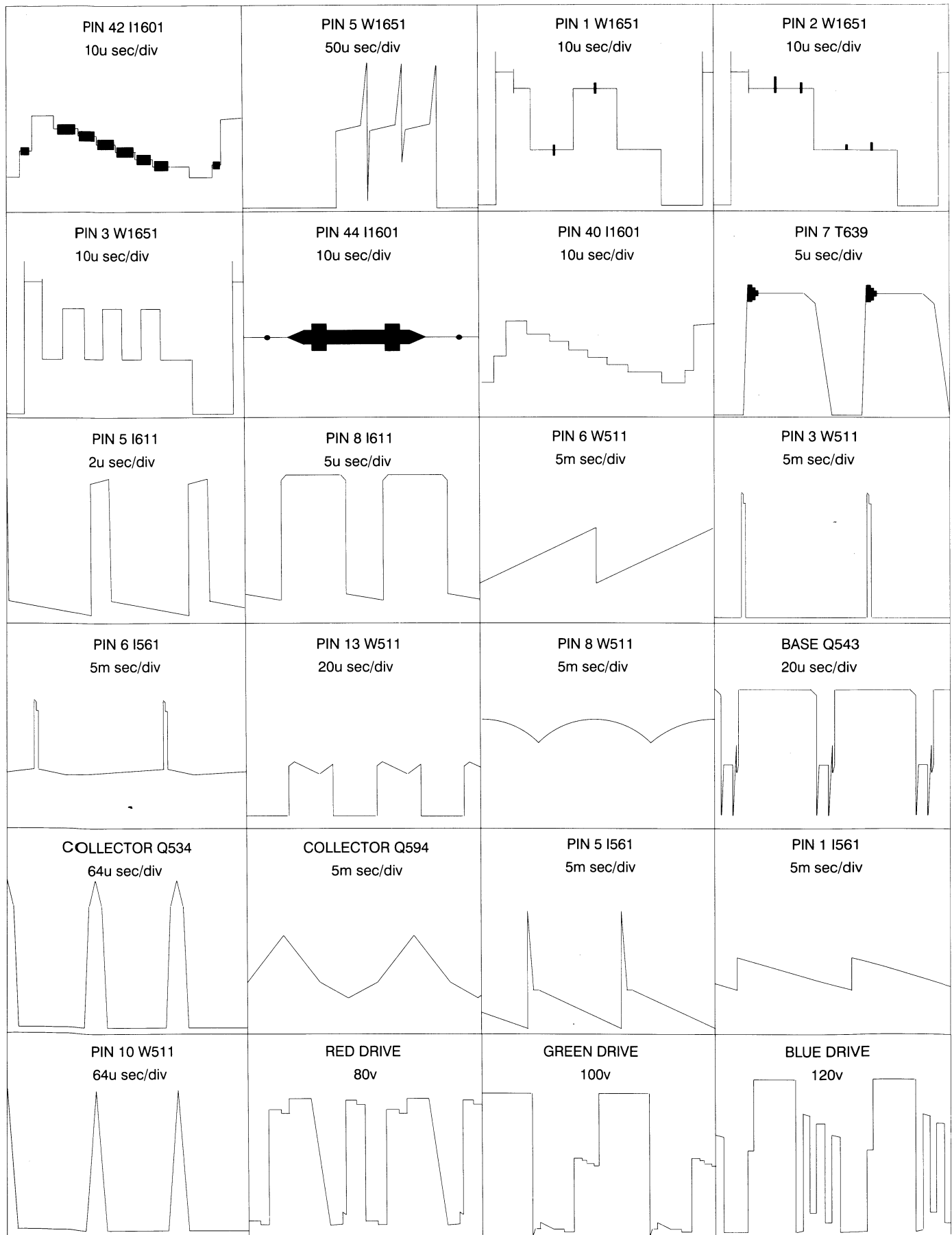
MC-Service

B – BOARD		
TRANSISTORS	DIODES	I.C.'S
Q101 – B2	D105 – A1	I.C.500 – C2
Q520 – B1	D107 – A2	I.C.401 – C2
Q030 – B3	D302 – A2	I.C.701 – D2
Q202 – B3	D203 – A2	
Q751 – D2	D101 – A2	
	D206 – A2	
	D208 – A2	
	D304 – A3	
	D534 – B1	
	D533 – B1	
	D110 – B2	
	D113 – B2	
	D116 – B2	
	D117 – B2	
	D211 – B3	
	D215 – B3	
	D212 – B3	
	D309 – B3	
	D314 – B3	
	D420 – C2	
	D418 – C2	
	D419 – C3	



WAVEFORM PATTERN TABLE

SIGNAL TABELLE










SCHEMATIC DIAGRAM FOR MODELS TX-28WD1C / TX-28WD1E (EURO-2S CHASSIS)

IMPORTANT SAFETY NOTICE

Components identified by  mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.

Notes

1. **RESISTOR**
All resistors are carbon 1/8W resistor, unless marked.
Unit of resistance is OHM (Ω) (K=1,000, M=1,000,000).
2. **CAPACITOR**
All capacitors are ceramic 50V, unless marked. Unit of capacitance is μ F, unless otherwise stated.
3. **COIL**
Unit of inductance is μ H, unless otherwise stated.
4. **TEST POINT**
 : Test Point position
 : Waveform Test Point position
5. **EARTH SYMBOL**
 : Chassis Earth (Cold)
 : Line Earth (Hot)
6. **VOLTAGE MEASUREMENT**
Voltage is measured by a DC voltmeter.
Measurement conditions are as follows:
Power source AC 220-240V, 50Hz
Receiving Signal Colour Bar signal (RF)
All customer controls Maximum position
7.
 -  : Indicates the Video signal path
 -  : Indicates the Audio signal path
 -  : Indicates the Vertical/Horizontal signal path
8. This schematic diagram is the latest at the time of printing and is subject to change without notice.

Precautions

- a. Do not short-circuit the hot and cold circuits as electrical components may be damaged.
- b. Do not connect an instrument, such as an oscilloscope, to the hot and cold circuits simultaneously, as this may cause fuse failure. Connect the earth of the instruments to the earth connection of the circuit being measured.
- c. Make sure to disconnect the power plug before removing the chassis.
- d. Do not touch the hot part, or the hot and cold parts at the same time, as you are liable to a shock hazard.

Remarks








9. The Power Circuit contains a circuit area which uses a separate power supply to isolate the earth connection. The circuit is defined by HOT and COLD indications in the schematic diagram. All circuits, except the Power Circuit, are COLD. Take the following precautions:

ZEICHENERKLÄRUNG FÜR MODELL TX-28WD1C / TX-28WD1E (EURO-2S CHASSIS)

WICHTIGER SICHERHEITSHINWEIS

Teile, die mit einem Hinweis  gekennzeichnet sind, sind wichtig für die Sicherheit. Sollte ein Auswechseln erforderlich sein, sind unbedingt Originalteile einzusetzen.

Anmerkung

1. **WIDERSTÄNDE**
Alle 1/8Watt Widerstände sind Kohlewiderstände, Abweichungen sind folgt gekennzeichnet.
Die Maßeinheit ist OHM (Ω) (K=1,000 M=1,000,000)
2. **KONDENSATOREN**
Alle Kondensatoren sind Keramikausführungen Spannungsfestig 50V. Die Maßeinheit ist μ F, wenn keine anderen Bezeichnungen genannt sind.
3. **SPULEN**
Die Maßeinheit ist μ H, Abweichungen sind gekennzeichnet.
4. **TESTPUNKTE**
 : Kennzeichnung der Testpunktposition
 : Testpunkte mit Oszillogrammen
5. **MASSESYMBOL**
 : Erdung am Chassis
 : Erdung an Masse-Leitung keit
6. **SPANNUNGSMESSUNG**
Spannungsmessungen sind mit einem DC-Voltmeter durchzuführen. Die Meßbedingungen sind folgende:
Netzspannung 220-240V 50Hz
Wiedergabe Signal Farbbalken - Testbild
Alle übrigen Einstellungen für Benutzer Sollangaben
7.
 -  : Videosignalweg
 -  : Audiosignalweg
 -  : Signalweg für Hor/Vert. Synchronsignale
8. Änderungen im Laufe der Fertigung sind möglich.

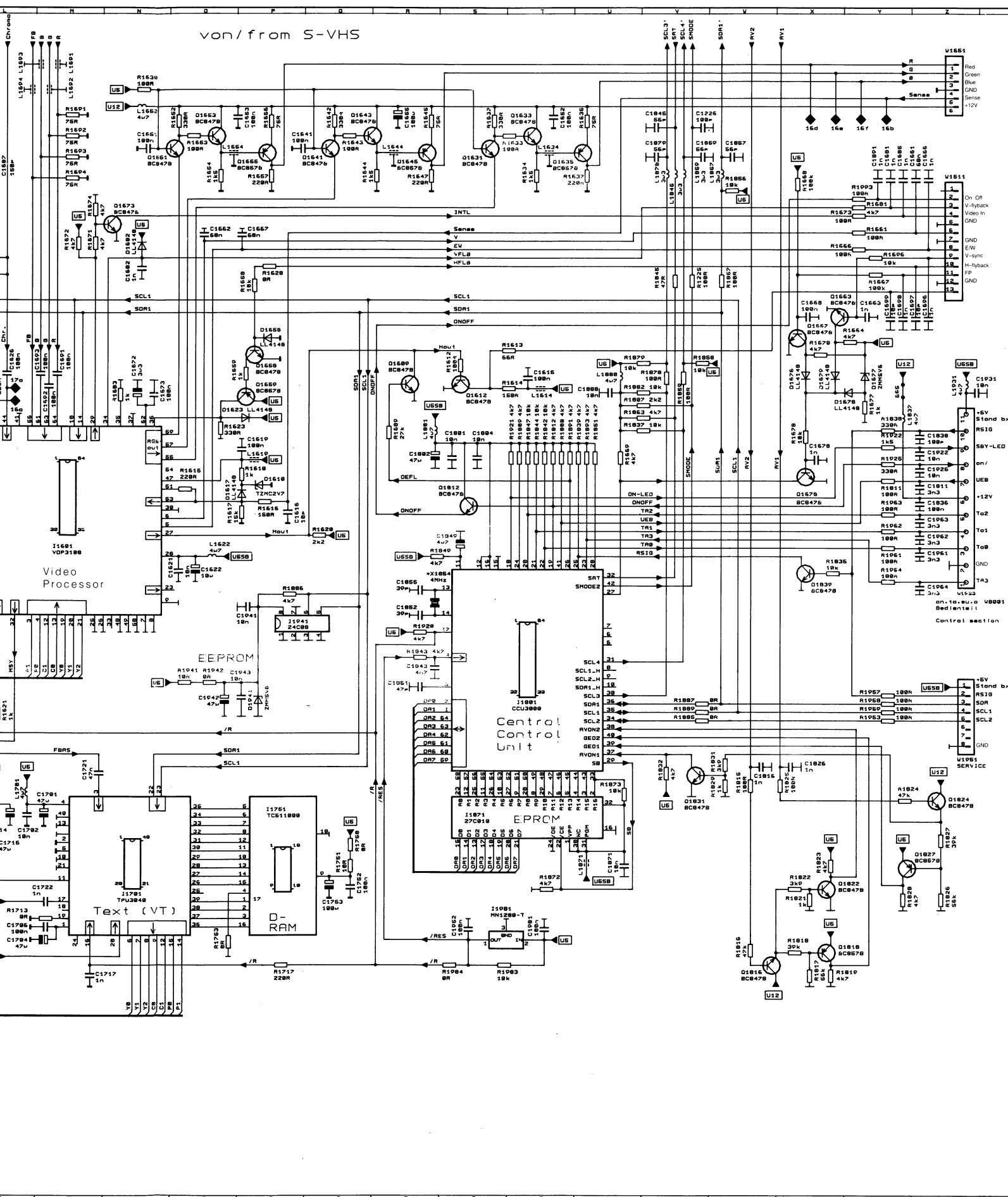
Für den netzverbundenen Bereich (HOT) sind folgende Vorsichtsmassregeln zu beachten:

- a. Weder die Leitungen im heißen noch Leitungen im kalten und im kalten Bereich gleichzeitig berühren. Es besteht die Gefahr eines elektrischen Schlages.
- b. Keinesfalls die Leitungen im heißen Bereich mit denen im kalten Bereich verbinden oder kurzschliessen. Dies kann zur Zerstörung von Bauteilen oder Sicherungen führen. Außerdem ist die elektrische Betriebssicherheit des Gerätes nicht mehr gegeben.
- c. Keine Messinstrumente gleichzeitig an Leitungen im heißen und kalten Bereich anschliessen. Sicherungen könnten zerstört werden. Die Erde des Messinstrumentes immer mit der des zu prüfenden Schaltkreises verbinden.
- d. Vor Ausbau des Chassis, Stecker aus der Netzsteckdose ziehen.

Bemerkungen

9. Das Schaltnetzteil enthält Bereiche, die direkt mit dem Netz verbunden sind. Diese Bereiche sind im Schaltplan mit HOT gekennzeichnet. Alle anderen Schaltungen sind mit COLD gekennzeichnet und haben keine direkte Verbindung mit dem Netz.

EINHEIT 396-86105.454



I.C. 1301

1.	2.4	17.19	33.38	49.37
2.	0	18.49	34.38	50.38
3.	0	19.0	35.0	51.0
4.	4.9	20.17	36.38	52.38
5.	0	21.49	37.38	53.38
6.	0	22.24	38.71	54.38
7.	4.9	23.24	39.8	55.38
8.	0	24.49	40.61	56.0
9.	2.4	25.01	41.0	57.49
10.	2.4	26.01	42.38	58.0
11.	2.4	27.0	43.38	59.15
12.	2.8	28.19	44.38	60.18
13.	2.9	29.19	45.38	61.0
14.	3.8	30.0	46.38	62.24
15.	4	31.38	47.38	63.25
16.	2.9	32.38	48.0	64.0

I.C. 1601

1.	0	17.25	33.2	49.0
2.	0	18.0	34.0	50.0
3.	2	19.2	35.0	51.0
4.	0	20.2	36.0	52.0
5.	1.5	21.2	37.0	53.0
6.	2.5	22.0	38.8	54.0
7.	0	23.07	39.26	55.04
8.	0	24.0	40.16	56.0
9.	0	25.0	41.0	57.04
10.	3	26.0	42.05	58.0
11.	0	27.08	43.0	59.04
12.	0.8	28.5	44.14	60.5
13.	0.8	29.5	45.5	61.0
14.	2.5	30.0	46.24	62.04
15.	4.9	31.0	47.5	63.0
16.	2.4	32.2	48.0	64.0

I.C. 1801

1.	2.8	17.49	33.04	49.
2.	2.5	18.49	34.49	50.
3.	4.6	19.0	35.3	51.
4.	4.9	20.33	36.22	52.
5.	1.8	21.33	37.49	53.
6.	1.9	22.33	38.49	54.
7.	1.8	23.49	39.49	55.
8.	4.7	24.49	40.0	56.
9.	4.7	25.49	41.49	57.
10.	4.7	26.0	42.01	58.
11.	4.9	27.49	43.12	59.
12.	4.9	28.49	44.	60.
13.	4.9	29.0	45.	61.
14.	2.5	30.49	46.	62.
15.	0	31.0	47.	63.
16.	4.9	32.0	48.	64.

I.C. 1751

1.	1.2
2.	5
3.	4.5
4.	0
5.	2.5
6.	2.5
7.	2.5
8.	2.5
9.	1.9
10.	2.1
11.	2.1
12.	2.2
13.	2.3
14.	2.7
15.	2.2
16.	1.6
17.	1.1
18.	0

I.C. 1871

1.	4.9	17.
2.		18.
3.		19.
4.		20.
5.		21.
6.		22.
7.		23.
8.		24. 0
9.		25.
10.		26.
11.		27.
12.		28.
13.		29. 4.
14.		30. 4.
15.		31. 4.
16. 0		32. 4.

I.C. 1941

1.	0
2.	0
3.	0
4.	0
5.	2.4
6.	3
7.	0
8.	5

I.C. 1351

1.	8
2.	12
3.	0

I.C. 1981

1.	5
2.	5
3.	0

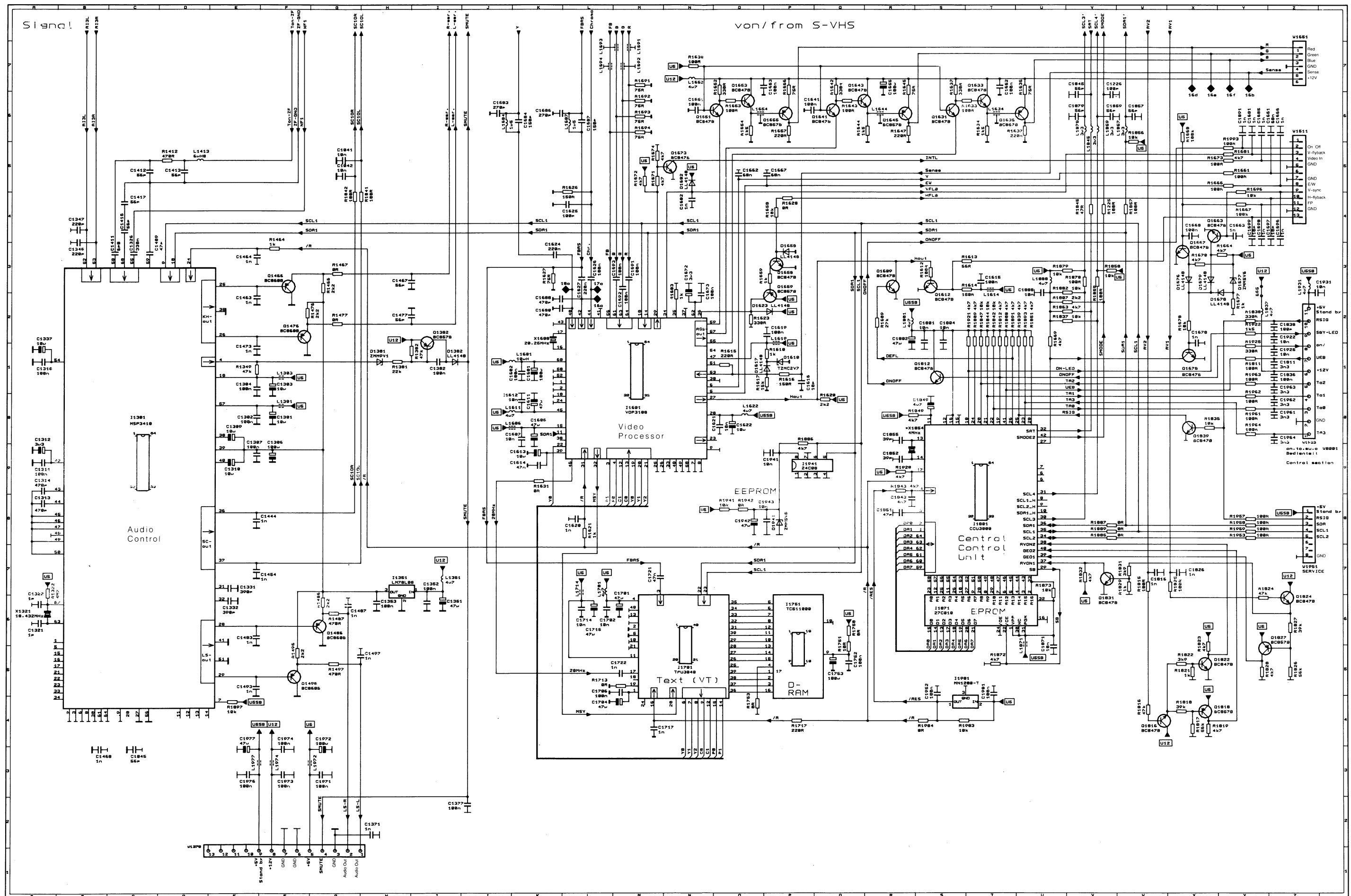
I.C. 1701

1.	2.9	21.01
2.	0	22.22
3.	1.3	23.28
4.	5	24.16
5.	0	25.16
6.	1	26.2
7.	1	27.23
8.	1	28.2
9.	1	29.23
10.	0	30.23
11.	5	31.24
12.	5	32.25
13.	0	33.28
14.	2	34.28
15.	2	35.28
16.	5	36.43
17.	5	37.4
18.	2.5	38.47
19.	2	39.1
20.	2	40.0

No	B	C	E
Q1382	12	12.1	0.1
Q1466	0.1	0.8	0
Q1476	0.1	0.8	0
Q1486	2	2.6	0
Q1496	2	2.7	0
Q1609	0	0.5	0
Q1612	0.5	1.3	0
Q1631	5	11.3	4.5
Q1633	11.2	12	10.6
Q1636	10.6	11.2	4
Q1641	5	11.3	4.5
Q1643	11.2	12	10.6
Q1646	10.6	11.2	4
Q1651	5	11.3	4.5
Q1653	11.2	12	10.6
Q1656	10.6	11.2	4
Q1663	0.7	0	0
Q1664	0	5.1	0
Q1673	0	7.1	0
Q1812	0	4.9	0
Q1816	0.1	12	0.5
Q1822	0	4.9	0
Q1824	0.1	12	0.5
Q1827	4.3	4.9	4.9
Q1831	0.1	4.9	0

DIGITAL BOARD

DIGITAL EINHEIT 396-86105.454



1.	2.4	17.1
2.	0	18.4
3.	0	19.0
4.	4.9	20.1
5.	0	21.4
6.	0	22.2
7.	4.9	23.2
8.	0	24.4
9.	2.4	25.0
10.	2.4	26.0
11.	2.4	27.0
12.	2.8	28.1
13.	2.9	29.1
14.	3.8	30.3
15.	4	31.0
16.	2.9	32.3

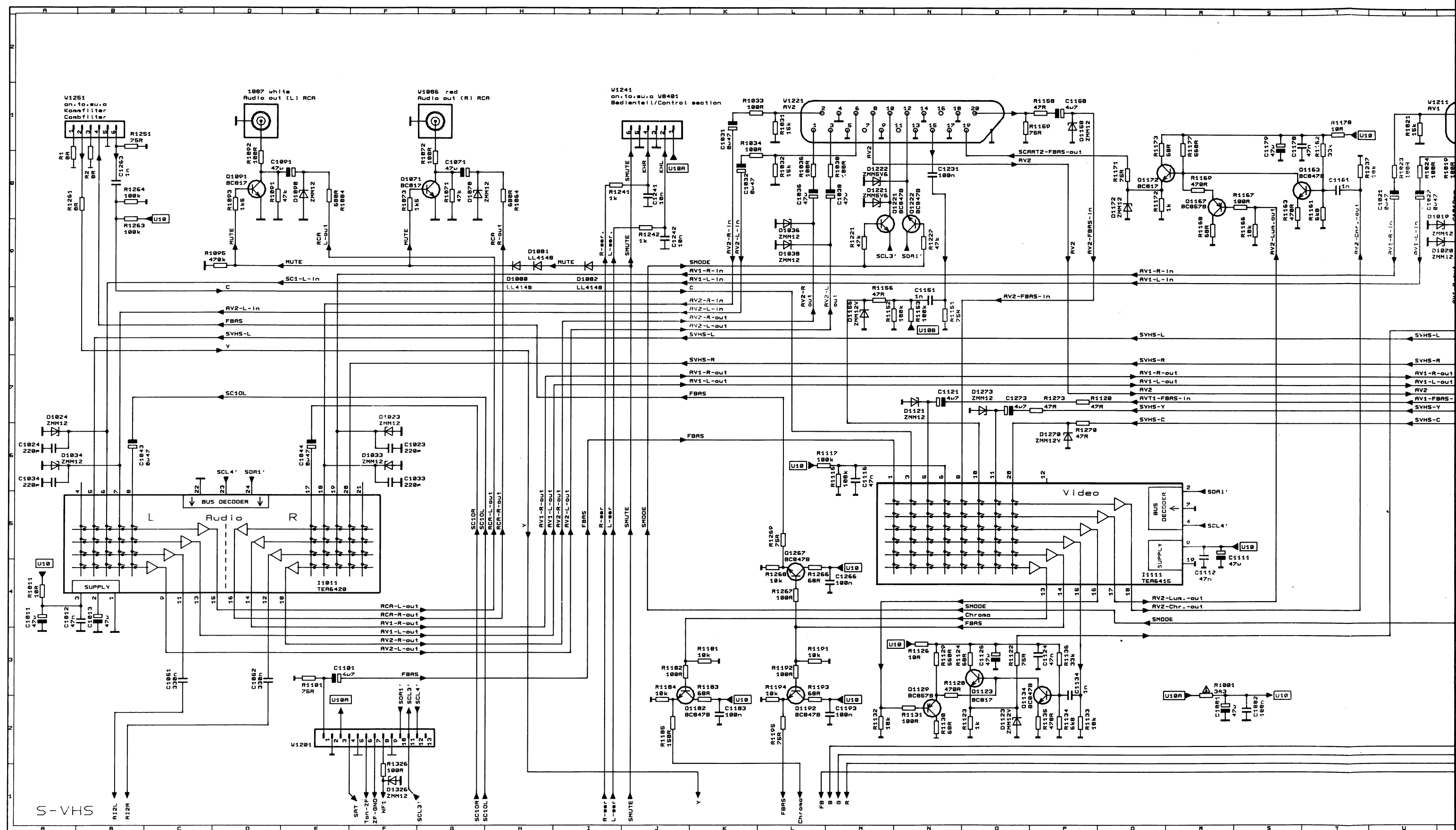
I.C. 1751

1.	1.2
2.	5
3.	4.5
4.	0
5.	2.5
6.	2.5
7.	2.5
8.	2.5
9.	1.9
10.	2.1
11.	2.1
12.	2.2
13.	2.3
14.	2.7
15.	2.2
16.	1.6
17.	1.1
18.	0

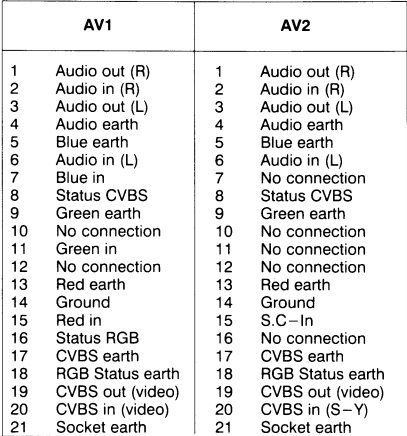
I.C. 1701

1.	2.9	21.0
2.	0	22.2
3.	1.3	23.2
4.	5	24.1
5.	0	25.1
6.	1	26.2
7.	1	27.2
8.	1	28.2
9.	1	29.2
10.	0	30.2
11.	5	31.2
12.	5	32.2
13.	0	33.2
14.	2	34.2
15.	2	35.2
16.	5	36.4
17.	5	37.4
18.	2.5	38.4
19.	2	39.1
20.	2	40.0

DIGITAL EINHEIT 396-86105.454



DIGITAL EINHEIT 396-86105.454



No	B	C	E
Q1071	0	0	0
Q1091	0	0	0
Q1123	3.8	8.9	3.1
Q1163	1.6	3.6	0.9
Q1167	3.7	4.4	0.4
Q1172	3.6	8.9	2.9
Q1182	2.6	8.6	1.9
Q1192	2.6	8.6	1.9
Q1221	0.1	0.7	4.9
Q1222	0.1	2.5	0.8

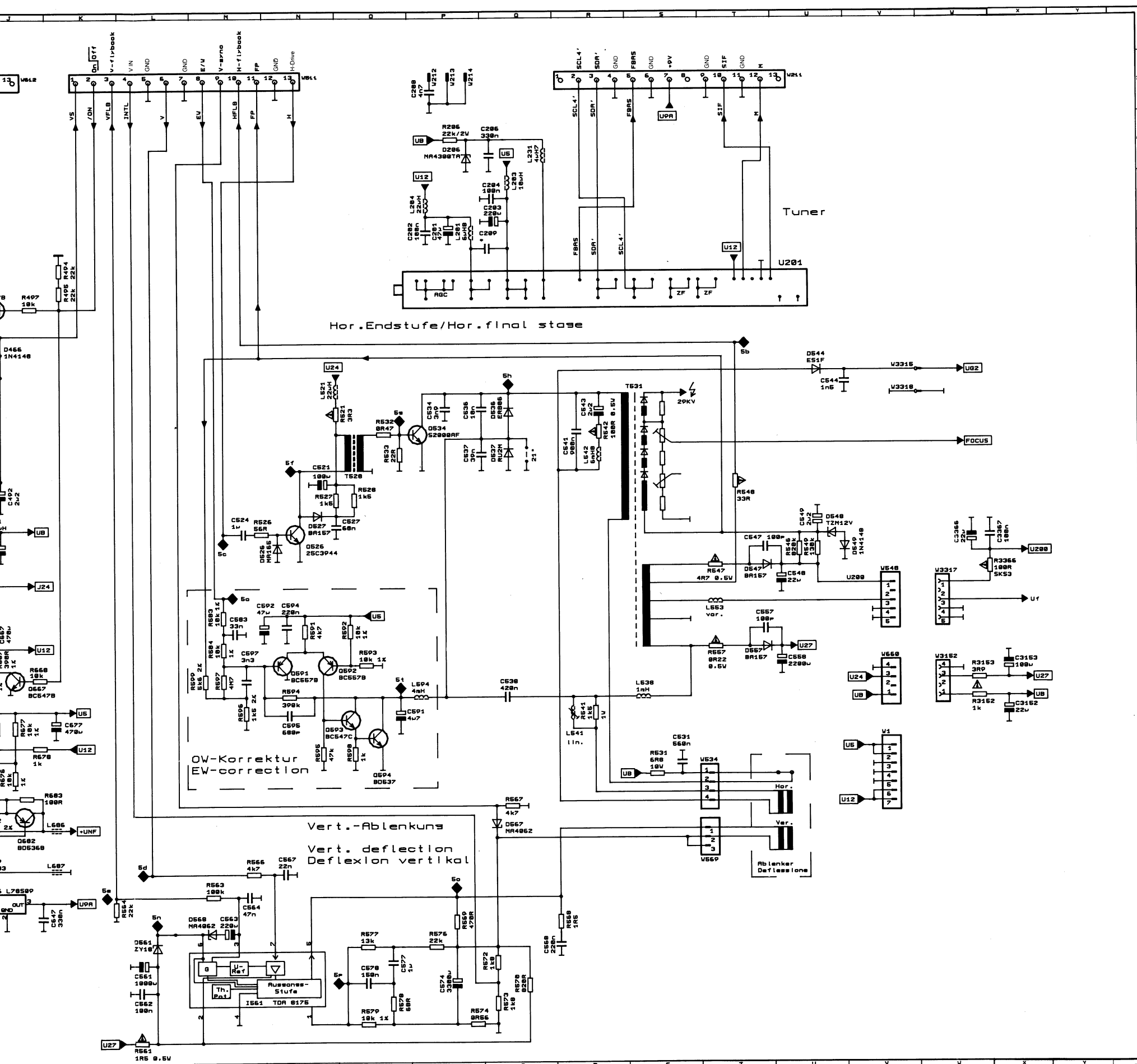
I.C. 1011

1. 0	13. 4.9
2. 2.5	14. 4.5
3. 4.9	15. 4.5
4. 4.5	16. 0
5. 4.5	17. 4.5
6. 4.5	18. 4.5
7. 4.5	19. 4.5
8. 4.5	20. 4.5
9. 4.5	21. 0
10. 4.5	22. 0
11. 4.5	23. 4.9
12. 4.5	24. 2.4

LC 1111

1. 4	11. 3.4
2. 2.5	12. 3.1
3. 3.4	13. 2.5
4. 5	14. 3.9
5. 3.4	15. 4.8
6. 5	16. 3.9
7. 0	17. 3.9
8. 3.4	18. 4.9
9. 9	19. 0
10. 4.5	20. 4.5

HASSIS 396-86107.451



I.C. 466

1.	1
2.	0.7
3.	20
4.	0
5.	0.7
6.	1
7.	19.3
8.	0
9.	0
10.	42
11.	19.4
12.	0

I.C. 611

1.	0.4
2.	1.2
3.	1.7
4.	0
5.	2.9
6.	12.5
7.	1.6
8.	0.4

I.C. 561

1.	2.6
2.	27.5
3.	2.3
4.	0
5.	15
6.	27
7.	2.5

I.C. 661

1.	10.8
2.	16
3.	12

I.C. 646

1.	12
2.	16
3.	12

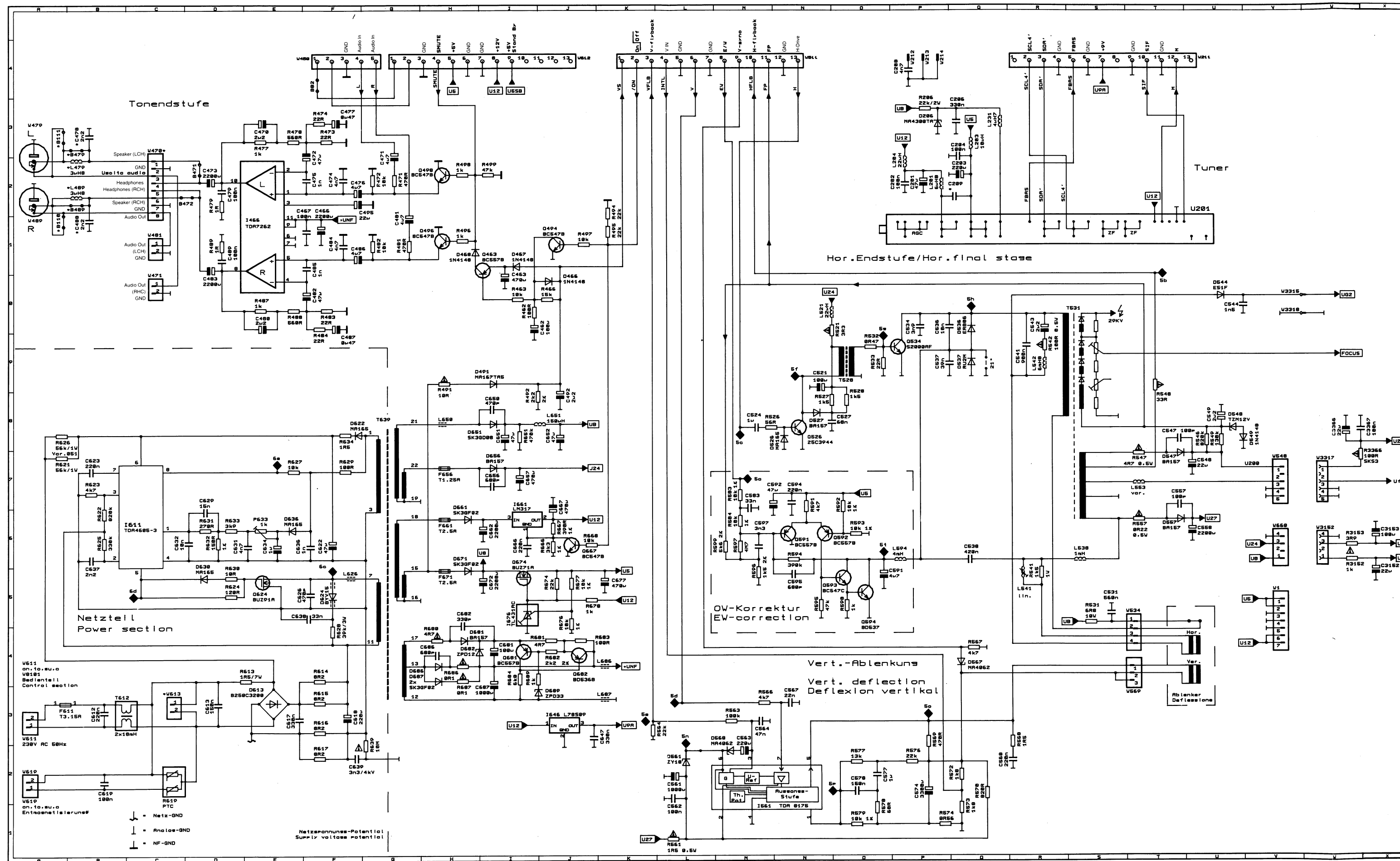
I.C. 676

K.	9.6
R.	9.6
A.	0

No	B	C	E
Q463	7.8	7.7	0.6
Q494	0	7.9	0
Q496	0.1	0	0
Q498	0.3	0	0
Q591	2.4	3	0
Q592	2.5	3	0.9
Q593	0.9	12.5	0.4
Q594	0.4	12.3	0
Q667		10.8	0
Q681	42	42	41.3
Q682	41.3	42.1	41.9
No	G	S	D
Q674	9.6	5	8

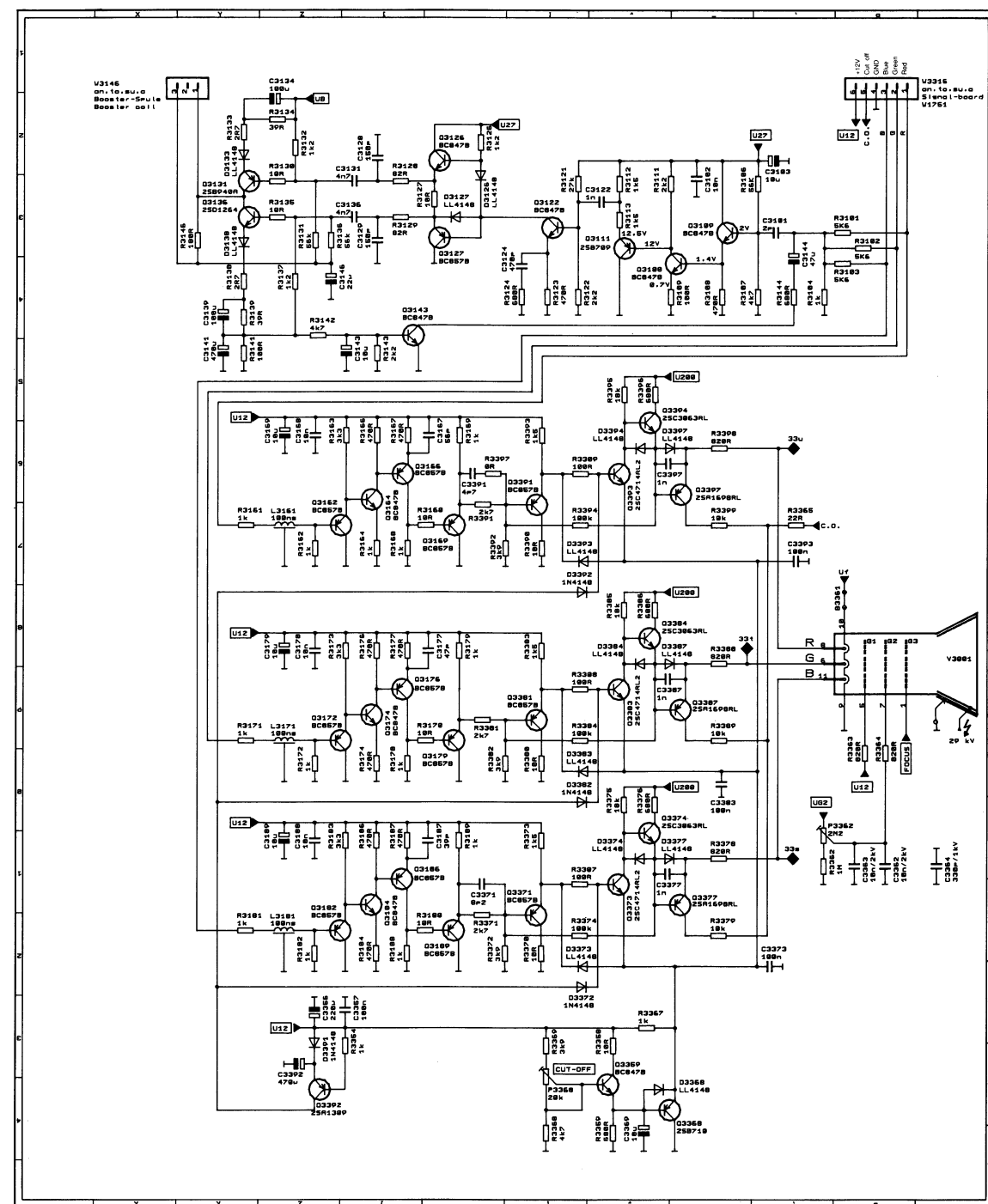
MC-Service

CHASSIS 396-86107.451



CRT BOARD BILDROHR -SVM-PLATTE

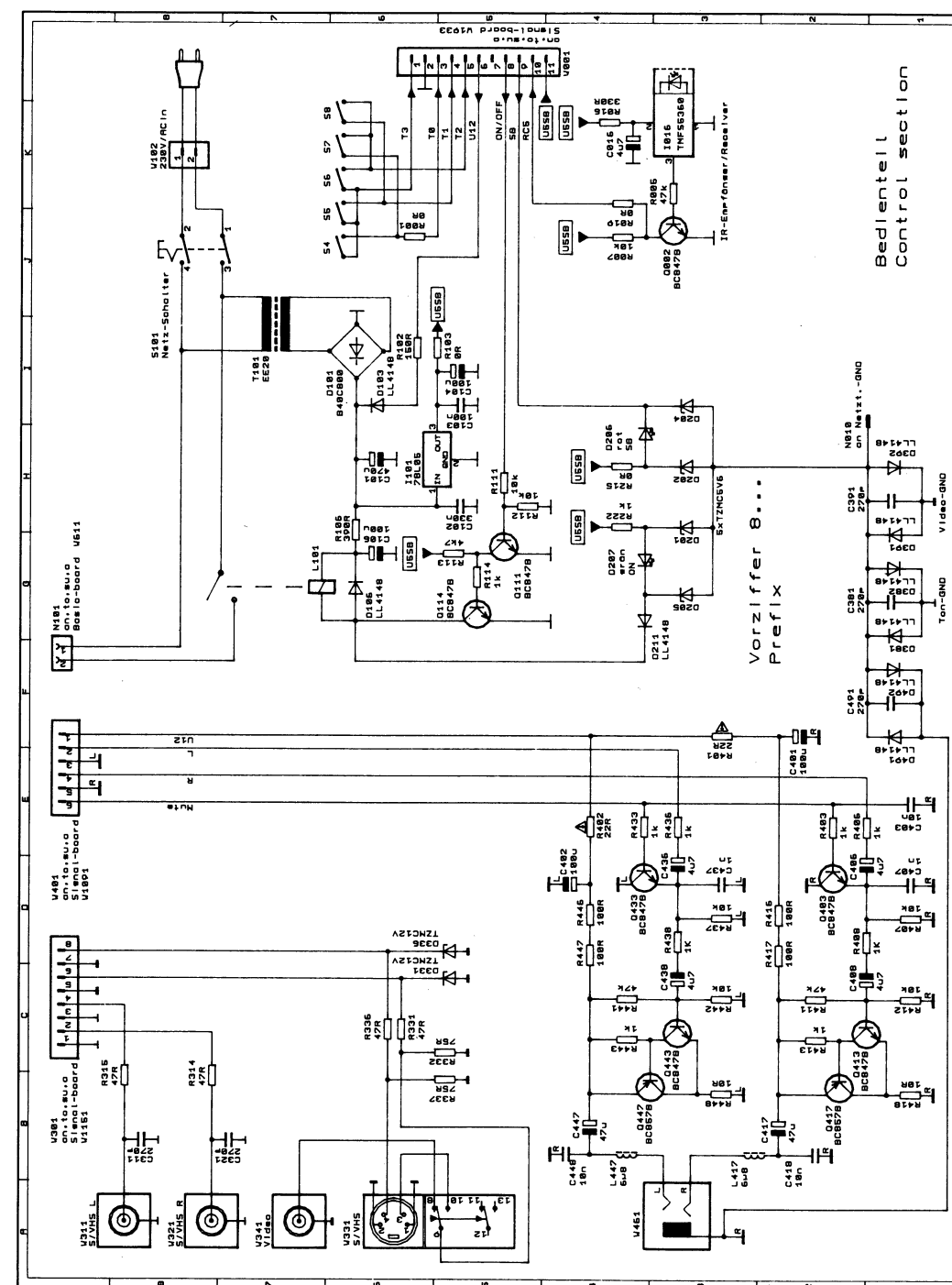
TNP107037AE



No	B	C	E
Q3108	1	26.4	1.6
Q3109	1.6	7.4	1
Q3111	26.4	8.6	0
Q3122	24	27	23.5
Q3127	26.4	24.9	0
Q3131	143	71	1.6
Q3136	2.1	71	1.6
Q3143	0	0	0
Q3162	1.5	2.3	0
Q3164	2.3	9.9	1.7
Q3166	9.9	10.6	2.4
Q3169	2.2	9.5	0
Q3172	1.6	2.4	0
Q3174	2.4	9.8	1.7
Q3176	9.8	10.4	2.7
Q3179	2.4	9.2	0
Q3182	1.7	2.4	0
Q3184	2.4	9.9	1.7
Q3186	9.9	10.3	2.6
Q3189	2.3	8.9	0
Q3359	4.8	11.6	4.3
Q3368	4.3	4.9	0
Q3371	4	4.6	0
Q3373	4.6	172	4.2
Q3374	172	198	1.71
Q3377	171	171	0
Q3381	4	4.6	0
Q3383	4.6	159	4.2
Q3384	159	198	1.59
Q3387	158	159	0
Q3391	3.9	4.6	0
Q3393	4.6	166	4.2
Q3394	166	197	1.65
Q3397	165	165	0

CONTROL BOARD BEDIENPLATTE

396-86302.051



No	B	C	E
Q111	0	0	0
Q114	0.7	0	0
Q403	0	0	0
Q413	0.9	2.7	0.3
Q417	2.7	3.5	0.3
Q433	0	0	0
Q443	0.9	2.7	0.3
Q447	2.7	3.5	0.3

LC 101
1 12
2 5
3 0

MC-Service

PARTS LOCATION

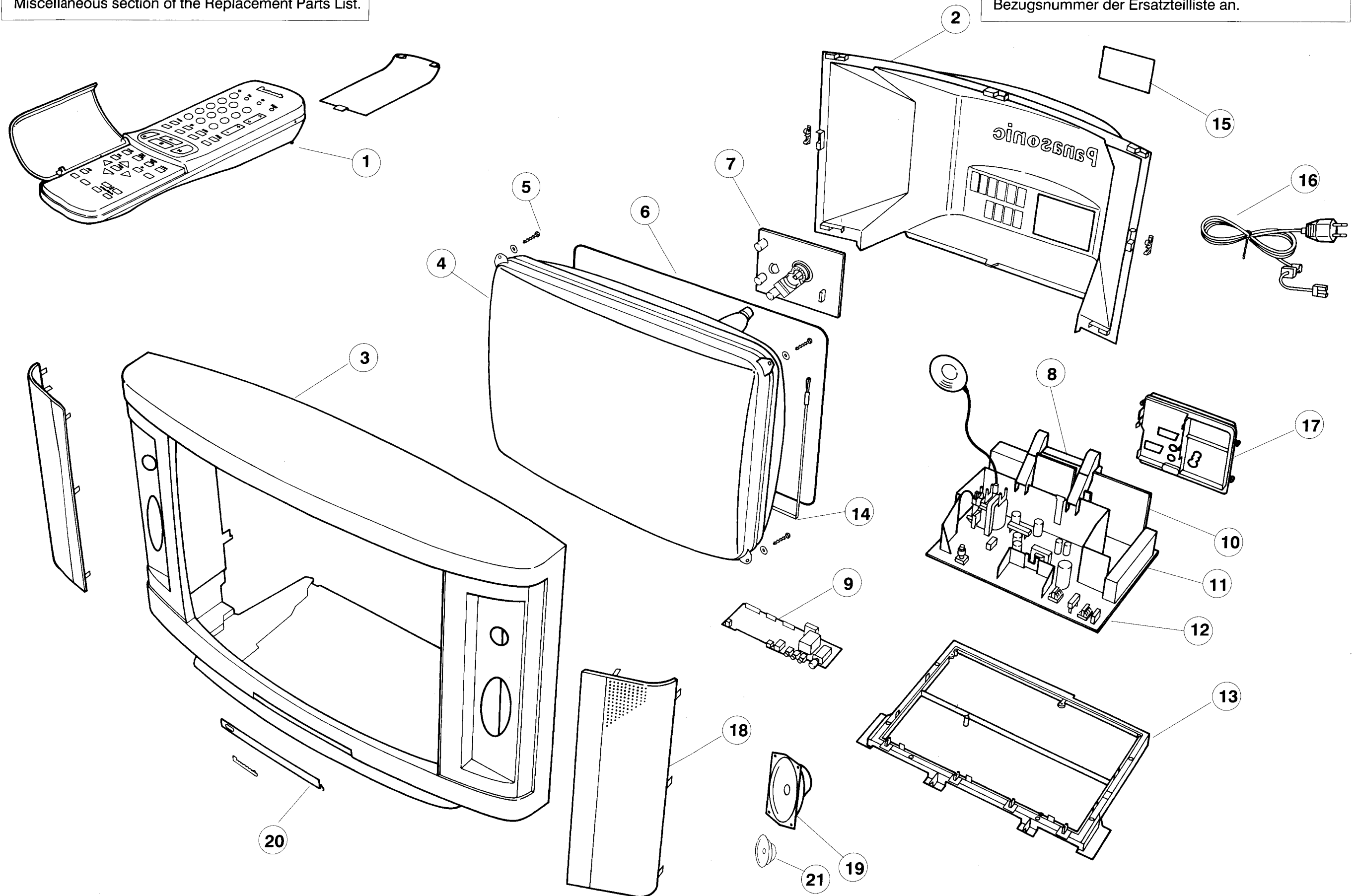
EXPLOSIONSZEICHNUNG

NOTE :

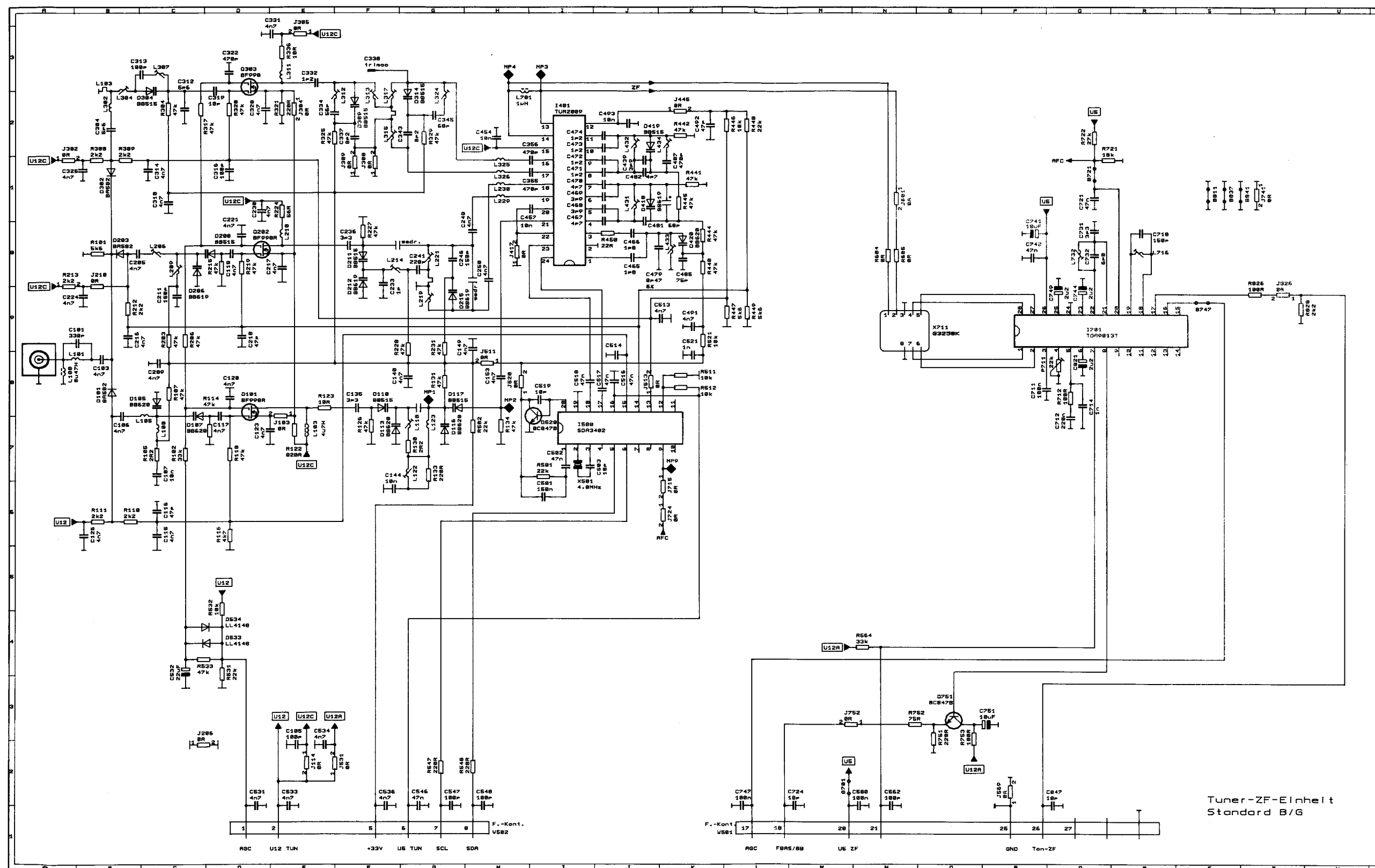
The numbers on the exploded view below refer to the Miscellaneous section of the Replacement Parts List.

Anmerkung :

Die Nummer auf den mechanischen Teilen zeigt die Bezugsnummer der Ersatzteilliste an.



TUNER 260-86530050



I.C. 701

1.	3.2	15.27
2.	3.2	16.4
3.	0	17.21
4.	0.8	18.2
5.	2.4	19.2
6.	2.9	20.26
7.	5.4	21.27
8.	2.5	22.27
9.	4.7	23.24
10.	2.4	24.0
11.	2.4	25.3
12.	1.6	26.49
13.	1.9	27.32
14.	1.9	28.32

I.C. 401

1.	0	13.51
2.	0	14.51
3.	0.1	15.11.8
4.	2.9	16.0
5.	4.9	17.0
6.	5.1	18.2.8
7.	2.9	19.2.8
8.	0.1	20.0
9.	0.5	21.0
10.	0.5	22.0
11.	0.1	23.11.3
12.	1.5	24.11.3

I.C. 500

1.	1.7	11.11.8
2.	2.3	12.2.4
3.	2.3	13.0
4.	0	14.4.9
5.	2.5	15.0
6.	4.9	16.4.9
7.	11.8	17.2.4
8.	0	18.2.4
9.	2.6	19.0
10.	0	20.0.6

No	B	C	E
Q520	0.6	4.9	0
Q751	2.5	8	1.9

Tuner-ZF-Einheit
Standard B/G

REPLACEMENT PARTS LIST

Important Safety Notice

Components identified by Δ mark have special characteristics important for safety.
When replacing any of these components, use only manufacturer's specified parts.

PARTS COMMON TO TX-28WD1C AND TX-28WD1E

Ref No.	Part No.	Description	
MISCELLANEOUS COMPONENTS			
1)	EUR51920	REMOTE CONTROL	
2)	TKU8E00131	REAR COVER	Δ
3)	750-24610050	CABINET	
4)	A66EAK252X21	C.R.T.	Δ
5)	54000121601	CRT FIXING SCREW	
6)	297-86025	DEGAUSS COIL	
7)	TNP117037AE	P.C.B (CRT DRIVE AND SVM)..	Δ
8)	TNP117035AA	P.C.B. (COMB FILTER)	Δ
9)	396-86302051	P.C.B. (CONTROL)	Δ
10)	*****	SEE DIFFERENCE LIST	
11)	U201	260-86530050(TUNER)	Δ
12)	*****	SEE DIFFERENCE LIST	
13)	TMX8E005	CHASSIS FRAME	
15)	*****	SEE DIFFERENCE LIST	
16)	170-22563050	POWER CORD	Δ
17)	TKR27803	REAR COVER FIXING BLOCK	
18)	*****	SEE DIFFERENCE LIST	
19)	*****	SEE DIFFERENCE LIST	
20)	666-84571	SMOKED PANEL	
	703-86334	COVER	
	TES8E007	SPRING	
	EXCELSA35T	COIL	
	EXCELSA35T	COIL	
	PLR817	DIODE	
	TZS4EP0001	DIGITAL PCB EXTENSION LEAD KIT	
	UM-3DEP-2P	BATTERY	
	TMW8E010	CRT FIXING BUSH	
	TZS2EK002	MEMORY PACK	
	TBM153010	PANASONIC BADGE	
	682-25020	BUTTON	
	245-86371002	PLASTIC SCREW	
	682-84569003	BUTTON	
	501-85022	LID	
	252-20923050	CUSHION-SET	
CAPACITORS			
C101	ECUV1H331KBN	S.M. CAP	50V 330pF
C103	ECUV1H472JCC	S.M. CAP	50V 4.7nF
C105	ECUV1H101DCN	S.M. CAP	50V 100pF
C106	ECUV1H472JCC	S.M. CAP	50V 4.7nF
C107	ECUV1H103DCC	S.M. CAP	50V 10nF
C115	ECUV1H472JCC	S.M. CAP	50V 4.7nF
C116	ECUV1H470DCN	S.M. CAP	50V 47pF
C117	ECUV1H472JCC	S.M. CAP	50V 4.7nF
C118	ECUV1H472JCC	S.M. CAP	50V 4.7nF
C120	ECUV1H472JCC	S.M. CAP	50V 4.7nF
C123	ECUV1H472JCC	S.M. CAP	50V 4.7nF
C126	ECUV1H472JCC	S.M. CAP	50V 4.7nF
C135	ECUV1H3R3DCG	S.M. CAP	50V 3.3nF
C140	ECUV1H472JCC	S.M. CAP	50V 4.7nF
C144	ECUV1H103DCC	S.M. CAP	50V 10nF
C149	ECUV1H472JCC	S.M. CAP	50V 4.7nF
C153	ECUV1H472JCC	S.M. CAP	50V 4.7nF
C201	ECEA1CU470	ELECT	16V 47 μ F
C202	ECQB1H104J	FILM	50V 100nF
C203	ECEA1CU221	ELECT	16V 220 μ F
C204	ECQB1H104J	FILM	50V 100nF

Ref No.	Part No.	Description	
C205	ECUV1H472JCC	S.M. CAP	50V 4.7nF
C206	ECQM1H334J	FILM	50V 330nF
C208	ECQB1H472J	FILM	50V 4.7nF
C209	ECUV1H472JCC	S.M. CAP	50V 4.7nF
C211	ECUV1H151DCN	S.M. CAP	50V 150pF
C216	ECUV1H472JCC	S.M. CAP	50V 4.7nF
C217	ECUV1H472JCC	S.M. CAP	50V 4.7nF
C218	ECUV1H4R7DCG	S.M. CAP	50V 4.7pF
C221	ECUV1H472JCC	S.M. CAP	50V 4.7nF
C224	ECUV1H472JCC	S.M. CAP	50V 4.7nF
C230	ECUV1H472JCC	S.M. CAP	50V 4.7nF
C233	ECUV1H010DCG	S.M. CAP	50V 1pF
C236	ECUV1H3R3CCM	S.M. CAP	50V 3.3pF
C241	ECUV1H821DCN	S.M. CAP	50V 820pF
C246	ECUV1H151DCN	S.M. CAP	50V 150pF
C248	ECUV1H472KBM	S.M. CAP	50V 4.7nF
C250	ECUV1H472KBM	S.M. CAP	50V 4.7nF
C304	ECUV1H5R6DCG	S.M. CAP	50V 5.6nF
C310	ECUV1H472JCC	S.M. CAP	50V 4.7nF
C312	ECUV1H5R6DCG	S.M. CAP	50V 5.6nF
C313	ECUV1H101DCN	S.M. CAP	50V 100pF
C314	ECUV1H472JCC	S.M. CAP	50V 4.7nF
C316	ECUV1H101DCN	S.M. CAP	50V 100pF
C319	ECUV1H100JCN	S.M. CAP	50V 10pF
C322	ECUV1H471DCN	S.M. CAP	50V 470pF
C325	ECUV1H472JCC	S.M. CAP	50V 4.7nF
C328	ECUV1H472JCC	S.M. CAP	50V 4.7nF
C331	ECUV1H472JCC	S.M. CAP	50V 4.7nF
C332	ECUV1H1R2DCG	S.M. CAP	50V 1.2pF
C334	ECUV1H560DCN	S.M. CAP	50V 56pF
C337	ECUV1H8R2DCG	S.M. CAP	50V 8.2pF
C343	ECUV1H8R2DCG	S.M. CAP	50V 8.2pF
C345	ECUV1H680DCN	S.M. CAP	50V 68pF
C355	ECUV1H471DCN	S.M. CAP	50V 470pF
C356	ECUV1H471DCN	S.M. CAP	50V 470pF
C439	ECUV1H3R9DCG	S.M. CAP	50V 3.9pF
C454	ECUV1H103KBM	S.M. CAP	50V 10nF
C457	ECUV1H103DCC	S.M. CAP	50V 10nF
C462	ECEA1EU101	ELECT	25V 100 μ F
C463	ECEA1CU471	ELECT	16V 470 μ F
C465	ECUV1H1R8DCG	S.M. CAP	50V 1.8pF
C466	ECEA1VU222	ELECT	35V 2200 μ F
C466	ECUV1H1R8DCG	S.M. CAP	50V 1.8pF
C467	ECUV1H4R7DCG	S.M. CAP	50V 4.7pF Tuner
C467	ECUV1H100DCM	S.M. CAP	50V 10pF
C468	ECUV1H3R9DCG	S.M. CAP	50V 3.9pF Tuner
C469	ECUV1H3R9DCG	S.M. CAP	50V 3.9pF
C470	ECUV1H4R7DCG	S.M. CAP	50V 4.7pF
C471	ECEA1HGE4R7	ELECT	50V 4.7 μ F
C471	ECUV1H1R2DCG	S.M. CAP	50V 1.2pF Tuner
C472	ECEA1CU470	ELECT	16V 47 μ F
C472	ECUV1H1R2DCG	S.M. CAP	50V 1.2pF Tuner
C473	ECEA1EGE222	ELECT	25V 2200 μ F
C473	ECUV1H1R2DCG	S.M. CAP	50V 1.2pF Tuner
C474	ECQB1H472J	FILM	50V 4.7nF
C474	ECUV1H1R2DCG	S.M. CAP	50V 1.2pF Tuner
C475	ECKC1H102J	CERAMIC	50V 1000pF
C476	ECEA1HGE4R7	ELECT	50V 4.7 μ F
C479	ECUV1HR47DCG	S.M. CAP	50V 4.7nF
C479	ECUV1H100DCM	S.M. CAP	50V 10pF
C481	ECEA1HGE4R7	ELECT	50V 4.7 μ F Tuner

Ref No.	Part No.	Description			
C481	ECUV1H680DCN	S.M. CAP	50V	68pF	
C482	ECEA1CU470	ELECT	16V	47μF	
C482	ECUV1H4R7DCG	S.M. CAP	50V	4.7pF	Tuner
C483	ECEA1EGE222	ELECT	25V	2200μF	
C484	ECQB1H472J	FILM	50V	4.7nF	
C485	ECKC1H102J	CERAMIC	50V	1000pF	Tuner
C485	ECKC1H102J	CERAMIC	50V	1000pF	
C486	ECEA1HGE4R7	ELECT	50V	4.7μF	
C487	ECUV1H471DCN	S.M. CAP	50V	470pF	
C489	ECUV1H100DCM	S.M. CAP	50V	10pF	
C491	ECUV1H472JCC	S.M. CAP	50V	4.7nF	
C492	ECEA1HU2R2	ELECT	50V	2.2μF	
C492	ECUV1H470DCN	S.M. CAP	50V	47pF	Tuner
C493	ECUV1H103DCC	S.M. CAP	50V	10nF	
C495	ECEA1EU220	ELECT	25V	22μF	Tuner
C495	ECEA1EV220	ELECT	25V	22μF	
C496	ECEA1HU100	ELECT	50V	10μF	
C501	ECKC1H103JB	CERAMIC	50V	10nF	
C502	ECUV1H473JCN	S.M. CAP	50V	47nF	
C503	ECUV1H180CCN	S.M. CAP	50V	18pF	
C513	ECUV1H472JCC	S.M. CAP	50V	4.7nF	
C514	ECUV1H472JCC	S.M. CAP	50V	4.7nF	
C516	ECUV1H473JCN	S.M. CAP	50V	47nF	
C517	ECUV1H472KBM	S.M. CAP	50V	4.7nF	
C518	ECUV1H472KBM	S.M. CAP	50V	4.7nF	
C519	ECUV1H100DCM	S.M. CAP	50V	10pF	
C521	ECEA1HU101	ELECT	50V	100μF	
C521	ECUV1H102JCC	S.M. CAP	50V	1nF	Tuner
C524	ECQV1H105JZ3	S.M. CAP	50V	1μF	
C527	ECQM2683JZ	FILM	250V	68nF	
C531	ECUV1H472JCC	S.M. CAP	50V	4.7nF	Tuner
C531	ECUV1H472JCC	S.M. CAP	50V	4.7nF	
C532	ECEA1CU100	ELECT	16V	10μF	
C533	ECUV1H472JCC	S.M. CAP	50V	4.7nF	
C534	ECUV1H472JCC	S.M. CAP	50V	4.7nF	
C534	357-25362	CERAMIC	1K6V	3.9nF	Tuner
C536	ECUV1H472JCC	S.M. CAP	50V	4.7nF	Tuner
C536	359-25246	CERAMIC	1K6V	10nF	
C537	ECQF4273JZH	FILM	400V	27nF	
C538	ECWF2H514J	FILM	16V	0.51μF	
C541	ECWF2H105J	FILM	16V	1μF	
C543	ECEA2VU2R2	ELECT	350V	2.2μF	
C544	ECKC3D152J	CERAMIC	2KV	1.5nF	Δ
C546	ECUV1H473JCN	S.M. CAP	50V	47nF	
C547	ECKC2H101J	CERAMIC	500V	100pF	TunerΔ
C547	ECUV1H101DCM	S.M. CAP	50V	100pF	
C548	ECEA2EU220	ELECT	250V	22μF	
C548	ECUV1H101DCM	S.M. CAP	50V	100pF	Tuner
C549	ECEA1HN2R2	ELECT	50V	2.2μF	
C557	ECKC2H101J	CERAMIC	500V	100pF	Δ
C558	ECEA1HU222	ELECT	50V	2200μF	
C561	ECEA1VU102	ELECT	35V	1nF	
C562	ECQB1H104J	FILM	50V	100nF	
C562	ECUV1H101DCM	S.M. CAP	50V	100pF	Tuner
C563	ECEA1HU221	ELECT	50V	220μF	
C567	ECQB1H223K	FILM	50V	22nF	
C568	ECQM1H224J	FILM	50V	220nF	
C574	ECEA1VU332	ELECT	35V	3300μF	
C577	ECQV1H105JZ	FILM	50V	1μF	
C578	ECQM1H154J	FILM	50V	150nF	
C580	356-19511	S.M. CAP	25V	100nF	
C583	ECQB1H333J	FILM	50V	33nF	
C591	ECEA1HGE4R7	ELECT	50V	4.7μF	
C592	ECEA1CU470	ELECT	16V	47μF	
C594	ECQM1H224J	FILM	50V	220nF	
C595	ECKC2H681J	CERAMIC	500V	680pF	Δ
C597	ECQB1H332K	FILM	50V	3.3nF	
C612	359-77769	FILM	250V	220nF	Δ
C613	359-11322	FILM	250V	150nF	Δ
C617	ECQM4334JZ	FILM	400V	330nF	

Ref No.	Part No.	Description			
C618	ECOS2G181NG	ELECT	500V	180pF	
C619	ECQE6104K	FILM	630V	100nF	
C622	ECEA1HFS470	ELECT	50V	47μF	
C623	ECQM1H224J	FILM	50V	220nF	
C626	ECKC3D471JB	CERAMIC	2kV	470pF	
C629	ECQB1H153K	FILM	50V	15nF	
C631	ECQB1H472J	FILM	50V	4.7nF	
C632	ECQB1H103J	FILM	50V	10nF	
C634	ECEA1HU010	ELECT	50V	1μF	
C636	ECQB1H102J	FILM	50V	1nF	
C637	ECQB1H222J	FILM	50V	2.2nF	
C638	ECQF6333JZH	FILM	630V	33nF	
C639	ECKCNS332J	CERAMIC	1.2KV	3.3nF	Δ
C647	ECQM1H334J	FILM	50V	330nF	
C650	ECKC3A102J	CERAMIC	1kV	1000pF	
C651	ECOS2EA221AB	ELECT	50V	220pF	
C652	ECOS2EA221AB	ELECT	50V	220pF	
C656	ECKC2H681J	CERAMIC	500V	680pF	Δ
C657	ECEA1HGE471	ELECT	50V	470μF	
C662	ECEA1EGE222	ELECT	25V	2200μF	
C666	ECQM1H224J	FILM	50V	220nF	
C667	ECEA1CU471	ELECT	16V	470μF	
C672	ECEA1EGE222	ELECT	25V	2200μF	
C677	ECEA1CU471	ELECT	16V	470μF	
C681	ECEA1EU101	ELECT	25V	100μF	
C682	ECCR1H331J	CERAMIC	50V	330pF	
C686	ECKC2H681J	CERAMIC	500V	680pF	Δ
C687	ECEA1HGE102	ELECT	50V	1nF	
C701	ECUV1H4R7DCG	S.M. CAP	50V	4.7pF	
C711	356-13442	S.M. CAP	50V	100nF	
C712	356-16785	S.M. CAP	50V	220nF	
C714	ECUV1H102JCC	S.M. CAP	50V	1nF	
C718	ECUV1H151DCN	S.M. CAP	50V	150pF	
C721	ECUV1H473JCN	S.M. CAP	50V	47nF	
C724	ECUV1H100DCM	S.M. CAP	50V	10pF	
C731	ECUV1H3R3DCG	S.M. CAP	50V	3R3pF	
C732	ECUV1H4R7DCG	S.M. CAP	50V	4.7pF	Tuner
C732	ECUV1H4R7DCG	S.M. CAP	50V	4.7pF	
C741	ECEA1CU100	ELECT	16V	10μF	
C742	ECUV1H473JCN	S.M. CAP	50V	47nF	
C744	ECEA1VU2R2	ELECT	35V	2.2μF	
C747	356-19511	S.M. CAP	25V	100nF	
C749	ECEA1VU2R2	ELECT	35V	2.2μF	
C751	ECEA1CU100	ELECT	16V	10μF	
C821	ECEA1VU2R2	ELECT	35V	2.2μF	
C847	ECUV1H100DCM	S.M. CAP	50V	10pF	
C1001	ECEA1CU470	ELECT	16V	47μF	
C1002	ECUV1H104ZFX	S.M. CAP	50V	100nF	
C1011	ECEA1CU470	ELECT	16V	47μF	
C1012	ECUV1H473JCN	S.M. CAP	50V	47nF	
C1013	ECEA1CU470	ELECT	16V	47μF	
C1019	ECEA1CU470	ELECT	16V	47μF	
C1020	ECEA1CU470	ELECT	16V	47μF	
C1021	ECEA1JU470	ELECT	63V	47μF	
C1022	ECEA1JU470	ELECT	63V	47μF	
C1023	ECUV1H221DCN	S.M. CAP	50V	220pF	
C1024	ECUV1H221DCN	S.M. CAP	50V	220pF	
C1031	ECEA1JU470	ELECT	63V	47μF	
C1032	ECEA1JU470	ELECT	63V	47μF	
C1033	ECUV1H221DCN	S.M. CAP	50V	220pF	
C1034	ECUV1H221DCN	S.M. CAP	50V	220pF	
C1036	ECEA1CU470	ELECT	16V	47μF	
C1038	ECEA1CU470	ELECT	16V	47μF	
C1041	ECUV1H103DCC	S.M. CAP	50V	10nF	
C1042	ECUV1H103DCC	S.M. CAP	50V	10nF	
C1043	ECEA1JU470	ELECT	63V	47μF	
C1044	ECEA1JU470	ELECT	63V	47μF	
C1045	ECUV1H560DCN	S.M. CAP	50V	56pF	
C1051	ECQM1H334J	FILM	50V	330nF	
C1052	ECQM1H334J	FILM	50V	330nF	

Ref No.	Part No.	Description		
C1071	ECEA1CU470	ELECT	16V	47µF
C1091	ECEA1CU470	ELECT	16V	47µF
C1101	ECEA1HU4R7	ELECT	50V	4.7µF
C1111	ECEA1CU470	ELECT	16V	47µF
C1112	ECUV1H473JCN	S.M. CAP	50V	47nF
C1116	ECUV1H473JCN	S.M. CAP	50V	47nF
C1121	ECEA1HU4R7	ELECT	50V	4.7µF
C1124	ECUV1H473JCN	S.M. CAP	50V	47nF
C1126	ECEA1CU470	ELECT	16V	47µF
C1134	ECUV1H102KBX	S.M. CAP	50V	1nF
C1151	ECUV1H102KBX	S.M. CAP	50V	1nF
C1158	ECEA1HU4R7	ELECT	50V	4.7µF
C1161	ECUV1H102JCC	S.M. CAP	50V	1nF
C1178	ECUV1H473JCN	S.M. CAP	50V	47nF
C1179	ECEA1CU470	ELECT	16V	47µF
C1183	ECUV1H104ZFX	S.M. CAP	50V	100nF
C1184	ECUV1H560DCN	S.M. CAP	50V	56pF
C1193	ECUV1H104ZFX	S.M. CAP	50V	100nF
C1204	ECUV1H102JCC	S.M. CAP	50V	1nF
C1226	ECUV1H101DCN	S.M. CAP	50V	100pF
C1231	ECUV1H104ZFX	S.M. CAP	50V	100nF
C1241	ECUV1H103DCC	S.M. CAP	50V	10nF
C1242	ECUV1H103DCC	S.M. CAP	50V	10nF
C1263	ECUV1H102JCC	S.M. CAP	50V	1nF
C1266	ECUV1H104ZFX	S.M. CAP	50V	100nF
C1271	ECUV1H102JCC	S.M. CAP	50V	1nF
C1273	ECEA1HU4R7	ELECT	50V	4.7µF
C1282	ECEA1JU470	ELECT	63V	47µF
C1284	ECEA1JU470	ELECT	63V	47µF
C1301	ECEA1CU100	ELECT	16V	10µF
C1302	ECUV1H104ZFX	S.M. CAP	50V	100nF
C1303	ECEA1CU100	ELECT	16V	10µF
C1304	ECUV1H104ZFX	S.M. CAP	50V	100nF
C1306	ECEA1CU101	ELECT	16V	100µF
C1307	ECUV1H104ZFX	S.M. CAP	50V	100nF
C1309	ECEA1CU100	ELECT	16V	10µF
C1310	ECEA1CU100	ELECT	16V	10µF
C1311	ECUV1H104ZFX	S.M. CAP	50V	100nF
C1312	ECEA1HU3R3	ELECT	50V	3.3µF
C1312	ECEA50Y3R3	ELECT	50V	3.3µF
C1313	ECUV1H471DCN	S.M. CAP	50V	470pF
C1314	ECUV1H471DCN	S.M. CAP	50V	470pF
C1315	ECEA1CU100	ELECT	16V	10µF
C1316	ECUV1H104ZFX	S.M. CAP	50V	100nF
C1321	ECUV1H010DCG	S.M. CAP	50V	1pF
C1322	ECUV1H010DCG	S.M. CAP	50V	1pF
C1326	ECQM1H334J	FILM	50V	330nF
C1327	ECUV1H221DCN	S.M. CAP	50V	220pF
C1331	ECUV1H391JCX	S.M. CAP	50V	390pF
C1332	ECUV1H391JCX	S.M. CAP	50V	390pF
C1346	ECUV1H221DCN	S.M. CAP	50V	220pF
C1347	ECUV1H221DCN	S.M. CAP	50V	220pF
C1351	ECEA1CU470	ELECT	16V	47µF
C1352	ECUV1H104ZFX	S.M. CAP	50V	100nF
C1353	ECUV1H104ZFX	S.M. CAP	50V	100nF
C1371	ECUV1H102JCC	S.M. CAP	50V	1nF
C1377	ECUV1H104ZFX	S.M. CAP	50V	100nF
C1382	ECUV1H104ZFX	S.M. CAP	50V	100nF
C1409	ECUV1H470DCN	S.M. CAP	50V	47pF
C1411	ECUV1H47R7DCG	S.M. CAP	50V	4.7pF
C1412	ECUV1H560DCN	S.M. CAP	50V	56pF
C1413	ECUV1H560DCN	S.M. CAP	50V	56pF
C1416	ECUV1H47R7DCG	S.M. CAP	50V	4.7pF
C1417	ECUV1H560DCN	S.M. CAP	50V	56pF
C1444	ECUV1H102JCC	S.M. CAP	50V	1nF
C1454	ECUV1H102JCC	S.M. CAP	50V	1nF
C1463	ECUV1H102JCC	S.M. CAP	50V	1nF
C1464	ECUV1H102JCC	S.M. CAP	50V	1nF
C1467	ECUV1H560DCN	S.M. CAP	50V	56pF
C1468	ECUV1H102JCC	S.M. CAP	50V	1nF
C1473	ECUV1H102JCC	S.M. CAP	50V	1nF

Ref No.	Part No.	Description		
C1477	ECUV1H560DCN	S.M. CAP	50V	56pF
C1483	ECUV1H102JCC	S.M. CAP	50V	1nF
C1487	ECUV1H102JCC	S.M. CAP	50V	1nF
C1493	ECUV1H102JCC	S.M. CAP	50V	1nF
C1497	ECUV1H102JCC	S.M. CAP	50V	1nF
C1601	ECEA1CU101	ELECT	16V	100µF
C1602	ECUV1H104ZFX	S.M. CAP	50V	100nF
C1606	ECEA1CU470	ELECT	16V	47µF
C1607	ECUV1H103DCC	S.M. CAP	50V	10nF
C1611	ECEA1CU470	ELECT	16V	47µF
C1612	ECUV1H103DCC	S.M. CAP	50V	10nF
C1613	ECEA1CU100	ELECT	16V	10µF
C1614	ECUV1H473JCN	S.M. CAP	50V	47nF
C1615	ECUV1H104ZFX	S.M. CAP	50V	100nF
C1616	ECUV1H100DCM	S.M. CAP	50V	10pF
C1619	ECUV1H104ZFX	S.M. CAP	50V	100nF
C1620	ECUV1H102JCC	S.M. CAP	50V	1nF
C1621	ECUV1H103DCC	S.M. CAP	50V	10nF
C1622	ECEA1CU100	ELECT	16V	10µF
C1624	ECQM1H684J	FILM	50V	680nF
C1625	ECUV1H101DCN	S.M. CAP	50V	100pF
C1626	ECUV1H104ZFX	S.M. CAP	50V	100nF
C1627	ECQM1H684J	FILM	50V	680nF
C1641	ECUV1H104ZFX	S.M. CAP	50V	100nF
C1651	ECUV1H104ZFX	S.M. CAP	50V	100nF
C1652	ECUV1H104ZFX	S.M. CAP	50V	100nF
C1653	ECUV1H104ZFX	S.M. CAP	50V	100nF
C1655	ECEA1CU101	ELECT	16V	100µF
C1661	ECUV1H102KBX	S.M. CAP	50V	1nF
C1662	ECUV1H102KBX	S.M. CAP	50V	1nF
C1663	ECUV1H102KBX	S.M. CAP	50V	1nF
C1666	ECUV1H102JCC	S.M. CAP	50V	1nF
C1667	ECUV1H102KBX	S.M. CAP	50V	1nF
C1668	ECUV1H104ZFX	S.M. CAP	50V	100nF
C1672	ECEA1CU100	ELECT	16V	10µF
C1673	ECUV1H104ZFX	S.M. CAP	50V	100nF
C1678	ECUV1H102JCC	S.M. CAP	50V	1nF
C1680	ECUV1H471DCN	S.M. CAP	50V	470pF
C1681	ECUV1H102JCC	S.M. CAP	50V	1nF
C1682	ECUV1H102JCC	S.M. CAP	50V	1nF
C1683	ECUV1H271JCX	S.M. CAP	50V	270pF
C1684	ECUV1H151DCN	S.M. CAP	50V	150pF
C1685	ECUV1H102JCC	S.M. CAP	50V	1nF
C1686	ECUV1H271JCX	S.M. CAP	50V	270pF
C1687	ECUV1H151DCN	S.M. CAP	50V	150pF
C1688	ECUV1H471DCN	S.M. CAP	50V	470pF
C1691	ECUV1H104ZFX	S.M. CAP	50V	100nF
C1692	ECUV1H104ZFX	S.M. CAP	50V	100nF
C1693	ECUV1H104ZFX	S.M. CAP	50V	100nF
C1696	ECUV1H102JCC	S.M. CAP	50V	1nF
C1697	ECUV1H100DCM	S.M. CAP	50V	10pF
C1698	ECUV1H102JCC	S.M. CAP	50V	1nF
C1699	ECUV1H100DCM	S.M. CAP	50V	10pF
C1701	ECEA1CU470	ELECT	16V	47µF
C1702	ECUV1H103DCC	S.M. CAP	50V	10nF
C1704	ECEA1CU470	ELECT	16V	47µF
C1706	ECUV1H104ZFX	S.M. CAP	50V	100nF
C1714	ECUV1H103DCC	S.M. CAP	50V	10nF
C1715	ECEA1CU470	ELECT	16V	47µF
C1717	ECUV1H102JCC	S.M. CAP	50V	1nF
C1721	ECUV1H473JCN	S.M. CAP	50V	47nF
C1722	ECUV1H102JCC	S.M. CAP	50V	1nF
C1752	ECUV1H104ZFX	S.M. CAP	50V	100nF
C1753	ECEA1CU101	ELECT	16V	100µF
C1801	ECUV1H103DCC	S.M. CAP	50V	10nF
C1802	ECEA1CU470	ELECT	16V	47µF
C1804	ECUV1H103DCC	S.M. CAP	50V	10nF
C1811	ECUV1H332KBX	S.M. CAP	50V	33nF
C1816	ECUV1H102JCC	S.M. CAP	50V	1nF
C1826	ECUV1H102JCC	S.M. CAP	50V	1nF
C1836	ECUV1H104ZFX	S.M. CAP	50V	100nF

Ref No.	Part No.	Description		
C1838	ECUV1H101DCN	S.M. CAP	50V	100pF
C1843	ECUV1H472JCC	S.M. CAP	50V	4.7nF
C1845	ECUV1H560DCN	S.M. CAP	50V	56pF
C1849	ECEA1HU4R7	ELECT	50V	4.7μF
C1851	ECUV1H470DCN	S.M. CAP	50V	47pF
C1852	ECUV1H390DCN	S.M. CAP	50V	39pF
C1853	ECUV1H390DCN	S.M. CAP	50V	39pF
C1857	ECUV1H560DCN	S.M. CAP	50V	56pF
C1859	ECUV1H560DCN	S.M. CAP	50V	56pF
C1871	ECUV1H103DCC	S.M. CAP	50V	10nF
C1879	ECUV1H560DCN	S.M. CAP	50V	56pF
C1888	ECUV1H103DCC	S.M. CAP	50V	10nF
C1891	ECUV1H102JCC	S.M. CAP	50V	1nF
C1922	ECUV1H103DCC	S.M. CAP	50V	10nF
C1925	ECUV1H103DCC	S.M. CAP	50V	10nF
C1931	ECUV1H103DCC	S.M. CAP	50V	10nF
C1941	ECUV1H103DCC	S.M. CAP	50V	10nF
C1942	ECEA1CU470	ELECT	16V	47μF
C1943	ECUV1H103DCC	S.M. CAP	50V	10nF
C1961	ECUV1H332KBX	S.M. CAP	50V	3.3nF
C1962	ECUV1H332KBX	S.M. CAP	50V	3.3nF
C1963	ECUV1H332KBX	S.M. CAP	50V	3.3nF
C1964	ECUV1H332KBX	S.M. CAP	50V	3.3nF
C1965	ECUV1H332KBX	S.M. CAP	50V	3.3nF
C1971	ECUV1H104ZFX	S.M. CAP	50V	100nF
C1972	ECEA1CU101	ELECT	16V	100μF
C1973	ECUV1H104ZFX	S.M. CAP	50V	100nF
C1974	ECUV1H104ZFX	S.M. CAP	50V	100nF
C1976	ECUV1H104ZFX	S.M. CAP	50V	100nF
C1977	ECEA1CU470	ELECT	16V	47μF
C1981	ECUV1H104ZFX	S.M. CAP	50V	100nF
C1982	ECUV1H101DCN	S.M. CAP	50V	100pF
C3101	ECUV1H3R3DCG	S.M. CAP	50V	3R3pF
C3102	ECUV1H103DCC	S.M. CAP	50V	10nF
C3103	ECEA1HU100	ELECT	50V	10μF
C3122	ECUV1H102JCC	S.M. CAP	50V	1nF
C3124	ECUV1H471DCN	S.M. CAP	50V	470pF
C3128	ECUV1H151DCN	S.M. CAP	50V	150pF
C3129	ECUV1H151DCN	S.M. CAP	50V	150pF
C3131	ECKC2H472J	CERAMIC	500V	4.7nF ▲
C3134	ECEA1CU101	ELECT	16V	100μF
C3136	ECKC2H472J	CERAMIC	500V	4.7nF ▲
C3139	ECEA1CU101	ELECT	16V	100μF
C3141	ECEA1CU471	ELECT	16V	470μF
C3143	ECEA1CU100	ELECT	16V	10μF
C3144	ECEA1CU470	ELECT	16V	47μF
C3146	ECEA2EU220	ELECT	250V	22μF
C3152	ECEA2EU220	ELECT	250V	22μF
C3153	ECEA1JU101	ELECT	35V	100μF
C3167	ECUV1H560DCN	S.M. CAP	50V	56pF
C3168	ECUV1H103KBX	S.M. CAP	50V	10nF
C3169	ECEA1CU100	ELECT	16V	10μF
C3177	ECUV1H470DCN	S.M. CAP	50V	47pF
C3178	ECUV1H103DCC	S.M. CAP	50V	10nF
C3179	ECEA1CU100	ELECT	16V	10μF
C3187	ECUV1H390DCN	S.M. CAP	50V	39pF
C3188	ECUV1H103DCC	S.M. CAP	50V	10nF
C3189	ECEA1CU100	ELECT	16V	10μF
C3353	ECEA1CU221	ELECT	16V	220μF
C3356	ECEA1CU220	ELECT	16V	22μF
C3357	ECUV1H104ZFX	S.M. CAP	50V	100nF
C3358	ECEA1CU101	ELECT	16V	100μF
C3362	TACA1103P2KV	TRIMMER		
C3363	TACA1103P2KV	TRIMMER		
C3364	ECKC3A331J	CERAMIC	1000V	330pF ▲
C3366	ECEA2EU220	ELECT	250V	22μF
C3367	ECQM2104KZ	FILM	250V	100nF
C3369	ECEA1CU100	ELECT	16V	10μF
C3371	ECUV1H3R9DCG	S.M. CAP	50V	3.9pF
C3373	ECUV1H104ZFX	S.M. CAP	50V	100nF
C3377	ECUV1H102KBX	S.M. CAP	50V	1nF

Ref No.	Part No.	Description		
C3383	ECUV1H104ZFX	S.M. CAP	50V	100nF
C3387	ECUV1H102KBX	S.M. CAP	50V	1nF
C3391	ECUV1H100DCM	S.M. CAP	50V	10pF
C3393	ECUV1H104ZFX	S.M. CAP	50V	100nF
C3397	ECUV1H102KBX	S.M. CAP	50V	1nF
C8016	360-12629	FILM	1K6V	10nF
C8101	ECEA1HU471	ELECT	50V	470μF
C8102	359-79519	FILM	63V	330nF
C8103	356-13442	S.M. CAP	50V	100nF
C8104	ECEA1CU101	ELECT	16V	100μF
C8106	ECEA1HU101	ELECT	50V	100μF
C8311	356-15097	S.M. CAP	50V	270pF
C8321	356-15097	S.M. CAP	50V	270pF
C8381	356-15097	S.M. CAP	50V	270pF
C8391	356-15097	S.M. CAP	50V	270pF
C8401	ECEA1CU101	ELECT	16V	100μF
C8402	ECEA1CU101	ELECT	16V	100μF
C8403	ECUV1H103KBM	S.M. CAP	50V	10nF
C8406	360-12629	FILM	1K6V	10nF
C8407	ECUV1H102JCH	S.M. CAP	50V	1nF
C8408	360-12629	FILM	1K6V	10nF
C8417	ECEA1CU470	ELECT	16V	47μF
C8418	ECUV1H103KBM	S.M. CAP	50V	10nF
C8436	360-12629	FILM	1K6V	10nF
C8437	356-13211	S.M. CAP	50V	1nF
C8438	360-12629	FILM	1K6V	10nF
C8447	ECEA1CU470	ELECT	16V	47μF
C8448	ECUV1H103KBM	S.M. CAP	50V	10nF
C8491	35615097	S.M. CAP	50V	270pF

DIODES

Ref No.	Part No.	Description	
D101	BA582	DIODE	
D105	BB620	DIODE	
D107	BB620	DIODE	
D110	BB515	DIODE	
D113	BB620	DIODE	
D116	BB620	DIODE	
D117	BB515	DIODE	
D203	BA582	DIODE	
D206	BB619	DIODE	Tuner
D206	ZPD30G	DIODE	
D208	BB515	DIODE	
D211	BB515	DIODE	
D212	BB619	DIODE	
D215	BB619	DIODE	
D302	BA582	DIODE	
D304	BB515	DIODE	
D309	BB515	DIODE	
D314	BB515	DIODE	
D418	BB619	DIODE	
D419	BB515	DIODE	
D420	BB620	DIODE	
D466	1N4148	DIODE	
D467	1N4148	DIODE	
D468	1N4148	DIODE	
D491	MA167TA5	DIODE	
D526	MA165TA5	DIODE	
D527	BA157	DIODE	
D533	LL4148	DIODE	
D534	LL4148	DIODE	
D536	ERB0615	DIODE	TYPD0753VAG
D537	TVSRU2AM	DIODE	
D544	TVSES1FV1	DIODE	
D547	BA157	DIODE	
D548	ZPD12	DIODE	
D549	1N4148	DIODE	
D557	BA157	DIODE	
D561	BZY97C18	DIODE	
D567	MA4062	DIODE	

Ref No.	Part No.	Description
D568	MA4062	DIODE
D613	B250-C3200	DIODE
D622	MA165TA5	DIODE
D624	PLR817	DIODE
D630	MA165TA5	DIODE
D636	MA165TA5	DIODE
D651	352-24041	DIODE
D656	BA157	DIODE
D661	5K3GF02	DIODE
D671	5K3GF02	DIODE
D681	BA157	DIODE
D682	ZPD12	DIODE
D686	5K3GF02	DIODE
D687	5K3GF02	DIODE
D689	BZX79B33	DIODE
D1019	TZMC12	DIODE
D1020	TZMC12	DIODE
D1023	TZMC12	DIODE
D1024	TZMC12	DIODE
D1033	TZMC12	DIODE
D1034	TZMC12	DIODE
D1036	TZMC12	DIODE
D1038	TZMC12	DIODE
D1070	TZMC12	DIODE
D1080	LL4148	DIODE
D1081	LL4148	DIODE
D1082	LL4148	DIODE
D1090	TZMC12	DIODE
D1121	TZMC12	DIODE
D1123	TZMC12	DIODE
D1156	TZMC12	DIODE
D1158	TZMC12	DIODE
D1172	TZMC12	DIODE
D1221	TZMC5V6	ZENER DIODE
D1222	TZMC5V6	ZENER DIODE
D1270	TZMC12	DIODE
D1273	TZMC12	DIODE
D1282	TZMC12	DIODE
D1284	TZMC12	DIODE
D1326	TZMC12	DIODE
D1381	TZMC9V1	DIODE
D1382	LL4148	DIODE
D1610	TZMC2V7	DIODE
D1617	LL4148	DIODE
D1623	LL4148	DIODE
D1658	LL4148	DIODE
D1676	LL4148	DIODE
D1677	TZMC5V6	ZENER DIODE
D1678	LL4148	DIODE
D1679	LL4148	DIODE
D1682	LL4148	DIODE
D1941	TZMC5V6	ZENER DIODE
D3126	LL4148	DIODE
D3127	LL4148	DIODE
D3133	LL4148	DIODE
D3138	LL4148	DIODE
D3352	LL4148	DIODE
D3353	LL4148	DIODE
D3356	LL4148	DIODE
D3357	LL4148	DIODE
D3358	LL4148	DIODE
D3368	LL4148	DIODE
D3373	LL4148	DIODE
D3374	LL4148	DIODE
D3377	LL4148	DIODE
D3383	LL4148	DIODE
D3384	LL4148	DIODE
D3387	LL4148	DIODE
D3393	LL4148	DIODE
D3394	LL4148	DIODE
D3397	LL4148	DIODE

Ref No.	Part No.	Description
D8101	B40-C1000	DIODE
D8103	LL4148	DIODE
D8106	LL4148	DIODE
D8201	TZMC5V6	ZENER DIODE
D8202	TZMC5V6	ZENER DIODE
D8204	TZMC5V6	ZENER DIODE
D8205	TZMC5V6	ZENER DIODE
D8206	LR3369-H	DIODE
D8211	LL4148	DIODE
D8331	TZMC12	DIODE
D8336	TZMC12	DIODE
D8381	LL4148	DIODE
D8382	LL4148	DIODE
D8391	LL4148	DIODE
D8392	LL4148	DIODE
D8491	LL4148	DIODE
D8492	LL4148	DIODE

FUSES

F611	380-37669	FUSE	▲
F656	380-17123	FUSE	▲
F661	380-15825	FUSE	▲
F671	380-15825	FUSE	▲

INTEGRATED CIRCUITS

I401	TUA2009X	MIXER I.C.
I466	TDA7262	AUDIO OUTPUT
I500	SDA3402	TUNER MODULE
I561	TDA8175-3	VERTICAL OUTPUT
I611	TDA4605	SWITCHABLE POWER SUPPLY
I646	L78S09CV	9V REGULATOR
I661	LM317STM	12V REGULATOR
I676	TL431ACLP	5V REGULATOR
I701	TDA9813T-V2	VIF/SIF PROCESSOR
I1011	TEA6420/L	AUDIO SWITCH
I1111	TEA6415-A	VIDEO SWITCH
I1351	MC78L08ACP	8V REGULATOR
I1601	VDP3108	VIDEO PROCESSOR
I1701	TPU3040-12	TEXT PROCESSOR
I1751	TC511000AJ80	D RAM
I1801	CCU3000	CENTRAL CONTROL UNIT
I1871	27C010-06A	EPROM
I1981	MN1280T	RESET
I8016	TFMS5360	IR-RECEIVER
I8101	78L05ACP	5V STANDBY REGULATOR

SOCKETS/TERMINALS/LINK WIRES

J01	ERJ6GMY0R00	S.M.CARB LINK
J02	ERJ6GMY0R00	S.M.CARB LINK
J03	ERJ6GMY0R00	S.M.CARB LINK
J04	ERJ6GMY0R00	S.M.CARB LINK
J05	ERJ6GMY0R00	S.M.CARB LINK
J103	ERJ8GCMY0R00	WIRE LINK
J114	ERJ8GCMY0R00	WIRE LINK
J206	ERJ6GMY0R00	S.M.CARB LINK
J210	ERJ6GMY0R00	S.M.CARB LINK
J302	ERJ8GCMY0R00	WIRE LINK
J304	ERJ8GCMY0R00	WIRE LINK
J305	ERJ8GCMY0R00	WIRE LINK
J308	ERJ6GMY0R00	S.M.CARB LINK
J309	ERJ8GCMY0R00	WIRE LINK
J417	ERJ8GCMY0R00	WIRE LINK
J445	ERJ8GCMY0R00	WIRE LINK
J511	ERJ6GMY0R00	S.M.CARB LINK
J513	ERJ8GCMY0R00	WIRE LINK

Ref No.	Part No.	Description
J520	ERJ8G0Y0R00	WIRE LINK
J531	ERJ8G0Y0R00	WIRE LINK
J569	ERJ8G0Y0R00	WIRE LINK
J601	ERJ6GMY0R00	S.M.CARB LINK
J602	ERJ6GMY0R00	S.M.CARB LINK
J603	ERJ8G0Y0R00	WIRE LINK
J715	ERJ6GMY0R00	S.M.CARB LINK
J724	ERJ8G0Y0R00	WIRE LINK
J741	ERJ8G0Y0R00	WIRE LINK
J752	ERJ8G0Y0R00	WIRE LINK
J826	ERJ6GMY0R00	S.M.CARB LINK

COILS

L100	ELEMVR47KA	CHOKES
L101	297-19406	COIL
L103	ELEV4R7KA	COIL
L105	297-19464	COIL
L108	297-19502	COIL
L118	297-19487	COIL
L122	297-19491	COIL
L123	297-19487	COIL
L201	ELER6R8KA	COIL
L203	ELER100KA	COIL
L204	ELER220KA	COIL
L206	297-19465	COIL
L209	297-19469	COIL
L210	297-19470	COIL
L214	297-19476	COIL
L219	297-19490	COIL
L221	297-19492	COIL
L229	297-19494	COIL
L230	297-19494	COIL
L231	ELER4R7KA	COIL
L302	297-19463	COIL
L304	297-19463	COIL
L307	297-19468	COIL
L311	297-19474	COIL
L312	297-19610	COIL
L313	297-19607	COIL
L315	297-19480	COIL
L317	297-19608	COIL
L324	297-19610	COIL
L325	297-19498	COIL
L326	297-19498	COIL
L431	297-19500	COIL
L432	297-19463	COIL
L433	297-19501	COIL
L434	297-19609	COIL
L521	ELER220KA	COIL
L538	297-23293	COIL
L541	278-22561	REGULATOR
L542	ELC08D055	COIL
L594	297-23294	COIL
L626	EXCELD35V	COIL
L650	EXCELD35V	COIL
L651	298-79726001	CHOKES
L686	EXCELSA35T	COIL
L687	EXCELSA35T	COIL
L701	298-19606	CHOKES
L716	297-19746	CHOKES
L732	297-19396	COIL
L732	297-25423	COIL
L1301	EXCELD35V	COIL
L1303	EXCELD35V	COIL
L1351	ELEV4R7KA	COIL
L1413	ELEV6R8KA	COIL
L1601	ELEV100KA	COIL
L1606	EXCELD35V	COIL
L1611	ELEV4R7KA	COIL

Tuner

Ref No.	Part No.	Description
L1614	EXCELD35V	COIL
L1619	EXCELD35V	COIL
L1622	ELEV4R7KA	COIL
L1634	EXCEMT101BT	COIL
L1644	EXCEMT101BT	COIL
L1652	ELEV4R7KA	COIL
L1654	EXCEMT101BT	COIL
L1684	ELEMV1R5MA	COIL
L1687	ELEMV1R5MA	COIL
L1691	EXCEMT101BT	COIL
L1692	EXCEMT101BT	COIL
L1693	EXCEMT101BT	COIL
L1694	EXCEMT101BT	COIL
L1701	ELEV4R7KA	COIL
L1714	EXCELD35V	COIL
L1801	ELEV4R7KA	COIL
L1837	ELEV4R7KA	COIL
L1845	296-19281	COIL
L1857	296-19281	COIL
L1859	296-19281	COIL
L1871	EXCELD35V	COIL
L1878	296-19281	COIL
L1888	ELEV4R7KA	COIL
L1931	ELEV4R7KA	COIL
L1972	EXCELD35V	COIL
L1974	EXCELD35V	COIL
L1977	EXCELD35V	COIL
L3161	SDL-4101	COIL
L3171	SDL-4101	COIL
L3181	SDL-4101	COIL
L8101	387-25050	RELAY
L8417	298-20025	CHOKES
L8447	298-20025	CHOKES

CONTROLS

P633	EVND4AA00B13	CONTROL
P711	375-16131	POTENTIOMETER
P3362	RH0921D	VARIABLE CONTROL
P3368	EVN65UA00B24	CONTROL 20KΩ

TRANSISTORS

Q101	BF998R	TRANSISTOR
Q202	BF998R	TRANSISTOR
Q303	BF998-MO	TRANSISTOR
Q463	BC557B	TRANSISTOR
Q494	BC547B	TRANSISTOR
Q495	BC547B	TRANSISTOR
Q496	BC547B	TRANSISTOR
Q498	BC547B	TRANSISTOR
Q520	BC847B	TRANSISTOR
Q526	2SC3944RLB	TRANSISTOR
Q534	S2000AFLBLOE	TRANSISTOR
Q591	BC557B	TRANSISTOR
Q592	BC557B	TRANSISTOR
Q593	BC547B	TRANSISTOR
Q594	BD537	TRANSISTOR
Q624	BUZ91A	TRANSISTOR
Q674	BUZ71AF1	TRANSISTOR
Q681	BC557B	TRANSISTOR
Q682	BD536	TRANSISTOR
Q751	BC847B	TRANSISTOR
Q1071	BC817-25	TRANSISTOR
Q1091	BC817-25	TRANSISTOR
Q1123	BC817-25	TRANSISTOR
Q1129	BC857B	TRANSISTOR
Q1134	BC847B	TRANSISTOR
Q1163	BC847B	TRANSISTOR

Ref No.	Part No.	Description
Q1167	BC857B	TRANSISTOR
Q1172	BC817-25	TRANSISTOR
Q1182	BC847B	TRANSISTOR
Q1192	BC847B	TRANSISTOR
Q1221	BC847B	TRANSISTOR
Q1222	BC847B	TRANSISTOR
Q1267	BC847B	TRANSISTOR
Q1382	BC857B	TRANSISTOR
Q1466	BC860B	TRANSISTOR
Q1476	BC860B	TRANSISTOR
Q1486	BC860B	TRANSISTOR
Q1496	BC860B	TRANSISTOR
Q1609	BC847B	TRANSISTOR
Q1612	BC847B	TRANSISTOR
Q1631	BC847B	TRANSISTOR
Q1633	BC847B	TRANSISTOR
Q1636	BC857B	TRANSISTOR
Q1641	BC847B	TRANSISTOR
Q1643	BC847B	TRANSISTOR
Q1646	BC857B	TRANSISTOR
Q1651	BC847B	TRANSISTOR
Q1653	BC847B	TRANSISTOR
Q1656	BC857B	TRANSISTOR
Q1658	BC847B	TRANSISTOR
Q1659	BC857B	TRANSISTOR
Q1663	BC847B	TRANSISTOR
Q1667	BC847B	TRANSISTOR
Q1673	BC847B	TRANSISTOR
Q1678	BC847B	TRANSISTOR
Q1812	BC847B	TRANSISTOR
Q1816	BC847B	TRANSISTOR
Q1818	BC857B	TRANSISTOR
Q1822	BC847B	TRANSISTOR
Q1824	BC847B	TRANSISTOR
Q1827	BC857B	TRANSISTOR
Q1831	BC847B	TRANSISTOR
Q1839	BC847B	TRANSISTOR
Q3108	BC847B	TRANSISTOR
Q3109	BC847B	TRANSISTOR
Q3111	BC857B	TRANSISTOR
Q3122	BC847B	TRANSISTOR
Q3126	BC847B	TRANSISTOR
Q3127	BC857B	TRANSISTOR
Q3131	2SB940ALB	TRANSISTOR
Q3136	2SD1264ALB	TRANSISTOR
Q3143	BC847B	TRANSISTOR
Q3162	BC857B	TRANSISTOR
Q3164	BC847B	TRANSISTOR
Q3166	BC857B	TRANSISTOR
Q3169	BC857B	TRANSISTOR
Q3172	BC857B	TRANSISTOR
Q3174	BC847B	TRANSISTOR
Q3176	BC857B	TRANSISTOR
Q3179	BC857B	TRANSISTOR
Q3182	BC857B	TRANSISTOR
Q3184	BC847B	TRANSISTOR
Q3186	BC857B	TRANSISTOR
Q3189	BC857B	TRANSISTOR
Q3357	BC857B	TRANSISTOR
Q3359	BC847B	TRANSISTOR
Q3368	2SB710A-R	TRANSISTOR
Q3371	BC857B	TRANSISTOR
Q3373	2SC4714RL2	TRANSISTOR
Q3374	2SC3063RL	TRANSISTOR
Q3377	2SA1698RL	TRANSISTOR
Q3381	BC857B	TRANSISTOR
Q3383	2SC4714RL2	TRANSISTOR
Q3384	2SC3063RL	TRANSISTOR
Q3387	2SA1698RL	TRANSISTOR
Q3391	BC857B	TRANSISTOR
Q3393	2SC4714RL2	TRANSISTOR

Ref No.	Part No.	Description
Q3394	2SC3063RL	TRANSISTOR
Q3397	2SA1698RL	TRANSISTOR
Q8002	BC847B	TRANSISTOR
Q8111	BC847B	TRANSISTOR
Q8114	BC847B	TRANSISTOR
Q8403	BC847B	TRANSISTOR
Q8413	BC847B	TRANSISTOR
Q8417	BC857B	TRANSISTOR
Q8433	BC847B	TRANSISTOR
Q8443	BC847B	TRANSISTOR
Q8447	BC857B	TRANSISTOR

RESISTORS

R101	ERJ6GMYJ562	S.M.CARB	0.1W	5%	5K6Ω
R102	ERJ6GMYJ333	S.M.CARB	0.1W	5%	33KΩ
R105	ERJ6GMYJ2R2	S.M.CARB	0.1W	5%	2.2Ω
R107	ERJ6GMYJ473	S.M.CARB	0.1W	5%	47KΩ
R110	ERJ6GMYJ222	S.M.CARB	0.1W	5%	2K2Ω
R111	ERJ6GMYJ222	S.M.CARB	0.1W	5%	2K2Ω
R114	ERJ6GMYJ473	S.M.CARB	0.1W	5%	47KΩ
R116	ERJ6GMYJ472	S.M.CARB	0.1W	5%	4K7Ω
R118	ERJ6GMYJ473	S.M.CARB	0.1W	5%	47KΩ
R122	ERJ6GMYJ821	S.M.CARB	0.1W	5%	820Ω
R123	ERJ6GMYJ100	S.M.CARB	0.1W	5%	10Ω
R126	ERJ6GMYJ473	S.M.CARB	0.1W	5%	47KΩ
R130	ERJ6GMYJ2R2	S.M.CARB	0.1W	5%	2.2Ω
R131	ERJ6GMYJ473	S.M.CARB	0.1W	5%	47KΩ
R133	ERJ6GMYJ221	S.M.CARB	0.1W	5%	220Ω
R134	ERJ6GMYJ473	S.M.CARB	0.1W	5%	47KΩ
R203	ERJ6GMYJ473	S.M.CARB	0.1W	5%	47KΩ
R206	ERG2ANJ223	METAL	2W	5%	22KΩ
R206	ERJ6GMYJ473	S.M.CARB	0.1W	5%	47KΩ
R212	ERJ6GMYJ222	S.M.CARB	0.1W	5%	2K2Ω
R213	ERJ6GMYJ222	S.M.CARB	0.1W	5%	2K2Ω
R215	ERJ6GMYJ473	S.M.CARB	0.1W	5%	47KΩ
R219	ERJ6GMYJ473	S.M.CARB	0.1W	5%	47KΩ
R224	ERJ6GMYJ560	S.M.CARB	0.1W	5%	56Ω
R227	ERJ6GMYJ473	S.M.CARB	0.1W	5%	47KΩ
R228	ERJ6GMYJ473	S.M.CARB	0.1W	5%	47KΩ
R231	ERJ6GMYJ473	S.M.CARB	0.1W	5%	47KΩ
R259	ERD25TJ103	CARBON	0.25W	5%	10KΩ
R304	ERJ6GMYJ473	S.M.CARB	0.1W	5%	47KΩ
R308	ERJ6GMYJ222	S.M.CARB	0.1W	5%	2K2Ω
R309	ERJ6GMYJ222	S.M.CARB	0.1W	5%	2K2Ω
R317	ERJ6GMYJ473	S.M.CARB	0.1W	5%	47KΩ
R320	ERJ6GMYJ473	S.M.CARB	0.1W	5%	47KΩ
R321	ERJ6GMYJ221	S.M.CARB	0.1W	5%	220Ω
R325	ERJ6GMYJ473	S.M.CARB	0.1W	5%	47KΩ
R329	ERJ6GMYJ473	S.M.CARB	0.1W	5%	47KΩ
R336	ERJ6GMYJ100	S.M.CARB	0.1W	5%	10Ω
R440	ERJ6GMYJ473	S.M.CARB	0.1W	5%	47KΩ
R441	ERJ6GMYJ473	S.M.CARB	0.1W	5%	47KΩ
R442	ERJ6GMYJ473	S.M.CARB	0.1W	5%	47KΩ
R444	ERJ6GMYJ473	S.M.CARB	0.1W	5%	47KΩ
R445	ERJ6GMYJ473	S.M.CARB	0.1W	5%	47KΩ
R446	ERJ6GMYJ103	S.M.CARB	0.1W	5%	10KΩ
R447	ERJ6GMYJ562	S.M.CARB	0.1W	5%	56Ω
R448	ERJ6GMYJ223	S.M.CARB	0.1W	5%	22KΩ
R449	ERJ6GMYJ562	S.M.CARB	0.1W	5%	56Ω
R450	ERJ6GMYJ220	S.M.CARB	0.1W	5%	22Ω
R462	ERD25TJ101	CARBON	0.25W	5%	10Ω
R463	ERD25TJ103	CARBON	0.25W	5%	10KΩ
R466	ERD25TJ153	CARBON	0.25W	5%	15KΩ
R471	ERD25TJ471	CARBON	0.25W	5%	47Ω
R472	ERD25TJ103	CARBON	0.25W	5%	10KΩ
R473	ERD25TJ270	CARBON	0.25W	5%	27Ω
R478	366-81016	CARBON	0.1W	5%	820Ω
R479	ERDS1TJ1R0	CARBON	0.5W	5%	1Ω
R481	ERD25TJ471	CARBON	0.25W	5%	47Ω

Tuner

Ref No.	Part No.	Description			
R482	ERD25TJ103	CARBON 0.25W	5%	10KΩ	
R483	ERD25TJ270	CARBON 0.25W	5%	27Ω	
R488	366-81016	CARBON 0.1W	5%	820Ω	
R489	ERDS1TJ1R0	CARBON 0.5W	5%	1Ω	
R491	ERQ14AJ100	METAL 0.25W	5%	10Ω	△
R492	ERO25CKF2201	METAL 0.25W	1%	2K2Ω	△
R494	ERD25TJ223	CARBON 0.25W	5%	22KΩ	
R495	ERD25TJ223	CARBON 0.25W	5%	22KΩ	
R496	ERD25TJ102	CARBON 0.25W	5%	1KΩ	
R497	ERD25TJ103	CARBON 0.25W	5%	10KΩ	
R498	ERD25TJ102	CARBON 0.25W	5%	1KΩ	
R499	ERD25TJ473	CARBON 0.25W	5%	47KΩ	
R501	ERJ6GMYJ223	S.M.CARB 0.1W	5%	22KΩ	
R502	ERJ8GCMYJ223	FILM 0.125W	5%	22KΩ	
R511	ERJ8GCMYJ103	FILM 0.125W	5%	10KΩ	
R512	ERJ6GMYJ103	S.M.CARB 0.1W	5%	10KΩ	
R521	ERQ14AJ3R3	METAL 0.25W	5%	3R3Ω	△
R521	ERJ8GCMYJ103	FILM 0.125W	5%	10KΩ	Tuner
R526	ERD25TJ560	CARBON 0.25W	5%	56Ω	
R527	ERDS1TJ152	CARBON 0.5W	5%	1K5Ω	
R528	ERDS1TJ152	CARBON 0.5W	5%	1K5Ω	
R531	ERF10ZK6R8	CERAMIC 10W	10%	6R8W	△
R531	ERJ8GCMYJ223	FILM 0.125W	5%	22KΩ	Tuner
R532	ERJ6GMYJ103	S.M.CARB 0.1W	5%	10KΩ	Tuner
R532	ERW2PKR47	WIREWOUND2W	10%	0R47Ω	△
R533	ERDS1TJ220	CARBON 0.5W	5%	22Ω	
R533	ERJ6GMYJ473	S.M.CARB 0.1W	5%	47KΩ	Tuner
R541	ERG1ANJ152	METAL 1W	5%	1K5Ω	
R542	ERQ12AJ101	FUSABLE 0.5W	5%	100Ω	△
R543	ERO25CKF2201	METAL 0.25W	1%	2K2Ω	△
R546	ERD25TJ105	CARBON 0.25W	5%	1MΩ	
R547	ERJ6GMYJ221	S.M.CARB 0.1W	5%	220Ω	Tuner
R547	ERQ12HJ4R7	METAL 0.5W	5%	4R7Ω	△
R548	ERD25TJ472	CARBON 0.25W	5%	4K7Ω	
R548	ERJ6GMYJ221	S.M.CARB 0.1W	5%	220Ω	Tuner
R549	367-16961	CARBON 0.25W	5%	130KΩ	
R557	ERQ12HJR22	FUSIBLE 0.5W	5%	0R22Ω	△
R561	ERQ12HJ1R5	FUSIBLE 0.5W	5%	1R5Ω	△
R563	ERD25TJ104	CARBON 0.25W	5%	100KΩ	
R564	ERD25TJ223	CARBON 0.25W	5%	22KΩ	
R564	ERJ6GMYJ333	S.M.CARB 0.1W	5%	33KΩ	Tuner
R566	ERO25CKF4701	METAL 0.25W	1%	4K7Ω	△
R567	ERD25TJ472	CARBON 0.25W	5%	4K7Ω	
R568	ERD25TJ1R5	CARBON 0.25W	5%	1R5Ω	
R569	ERDS1TJ471	CARBON 0.5W	5%	470Ω	
R570	367-14156	CARBON 0.25W	5%	820Ω	
R572	ERO25CKF1801	METAL 0.25W	1%	1K8Ω	△
R573	ERO25CKF1801	METAL 0.25W	1%	1K8Ω	△
R574	ERW12PTKR56C	WIREWOUND0.5W	10%	0R56Ω	△
R576	ERO25CKF2202	METAL 0.25W	1%	22KΩ	△
R577	ERO25CKF1302	METAL 0.25W	1%	13KΩ	△
R578	ERO25CKF68R0	METAL 0.25W	1%	68Ω	△
R579	ERO25CKF1002	METAL 0.25W	1%	10KΩ	△
R583	ERO25CKF1002	METAL 0.25W	1%	10KΩ	△
R584	ERO25CKF1002	METAL 0.25W	1%	10KΩ	△
R591	ERD25TJ472	CARBON 0.25W	5%	4K7Ω	
R592	ERO25CKF1002	METAL 0.25W	1%	10KΩ	△
R593	ERO25CKF1002	METAL 0.25W	1%	10KΩ	△
R594	367-16791	CARBON 0.25W	5%	390KΩ	
R595	ERD25TJ473	CARBON 0.25W	5%	47KΩ	
R596	ERO25CKF1501	METAL 0.25W	1%	1K5Ω	△
R597	ERD25TJ475	CARBON 0.25W	5%	4M7Ω	
R598	ERD25TJ102	CARBON 0.25W	5%	1KΩ	
R599	ERO25CKF5601	METAL 0.25W	1%	5K6Ω	△
R602	ERJ6GMYJ101	S.M.CARB 0.1W	5%	100Ω	
R603	ERJ6GMYJ101	S.M.CARB 0.1W	5%	100Ω	
R604	ERJ6GMYOR00	S.M.CARB LINK			
R605	ERJ8GCMYOR00	S.M.CARB LINK			
R613	ERF7ZK1R5	CERAMIC 7W	10%	1R5W	△

Ref No.	Part No.	Description			
R614	ERW12PTKR82C	WIREWOUND0.5W	10%	0R82Ω	△
R615	ERW12PTKR82C	WIREWOUND0.5W	10%	0R82Ω	△
R616	ERW12PTKR82C	WIREWOUND0.5W	10%	0R82Ω	△
R617	ERW12PTKR82C	WIREWOUND0.5W	10%	0R82Ω	△
R619	372-73056	PTC			
R621	ERG1ANJ563	FILM 1W	5%	56KΩ	
R622	ERDS1TJ824	CARBON 0.5W	5%	820KΩ	
R623	ERD25TJ472	CARBON 0.25W	5%	4K7Ω	
R624	ERD25TJ121	CARBON 0.25W	5%	120Ω	
R625	366-24399	CARBON 0.25W	5%	330KΩ	
R626	ERG1ANJ563	FILM 1W	5%	56KΩ	
R627	ERD25TJ103	CARBON 0.25W	5%	10KΩ	
R628	ERG3SJS393	FILM 3W	5%	39KΩ	
R629	366-73257	CARBON 0.25W	5%	100Ω	
R630	ERD25TJ100	CARBON 0.25W	5%	10Ω	
R631	366-11412	CARBON 0.25W	5%	270Ω	
R632	ERD25TJ151	CARBON 0.25W	5%	150Ω	
R633	ERO25CKF3901	METAL 0.25W	1%	3K9Ω	△
R634	ERD25TJ1R5	CARBON 0.25W	5%	1R5Ω	
R639	367-19664	CARBON 0.25W	5%	10MΩ	
R651	ERDS1TJ474	CARBON 0.5W	5%	470KΩ	
R666	367-14897	CARBON 0.25W	5%	3K3Ω	
R667	367-21804	CARBON 0.25W	5%	390Ω	
R674	ERD25TJ223	CARBON 0.25W	5%	22KΩ	
R676	ERO25CKF1002	METAL 0.25W	1%	10KΩ	△
R677	ERO25CKF1002	METAL 0.25W	1%	10KΩ	△
R678	ERD25TJ102	CARBON 0.25W	5%	1KΩ	
R680	366-18416	CARBON 0.25W	10%	4R7Ω	
R681	366-13172	CARBON 0.25W	5%	4R7Ω	
R682	ERO25CKF2201	METAL 0.25W	1%	2K2Ω	△
R683	ERG2ANJ101	FILM 2W	5%	100Ω	
R684	ERD25TJ682	CARBON 0.25W	5%	6K8Ω	
R686	NKS2	FUSABLE 0.25W	5%	0.1Ω	
R687	NKS2	FUSABLE 0.25W	5%	0.1Ω	
R689	ERD25TJ102	CARBON 0.25W	5%	1KΩ	
R712	ERJ6GMYJ101	S.M.CARB 0.1W	5%	100Ω	
R721	ERJ8GCMYJ183	FILM 0.125W	5%	18KΩ	
R722	ERJ6GMYJ475	S.M.CARB 0.1W	5%	4M7Ω	
R751	ERJ6GMYJ221	S.M.CARB 0.1W	5%	220Ω	
R752	ERJ8GCMYJ750	FILM 0.125W	5%	75Ω	
R753	ERJ8GCMYJ181	FILM 0.125W	5%	180Ω	
R826	366-77176	CARBON 0.25W	5%	100Ω	
R828	ERJ6GMYJ222	S.M.CARB 0.1W	5%	2K2Ω	
R1001	ERQ12AJ3R3	FUSABLE 0.5W	5%	3R3Ω	△
R1011	ERQ14AJ100	METAL 0.25W	5%	10Ω	△
R1019	ERJ6GMYJ101	S.M.CARB 0.1W	5%	100Ω	
R1020	ERJ6GMYJ101	S.M.CARB 0.1W	5%	100Ω	
R1021	ERJ6GMYJ153	S.M.CARB 0.1W	5%	15KΩ	
R1022	ERJ6GMYJ153	S.M.CARB 0.1W	5%	15KΩ	
R1023	ERJ6GMYJ101	S.M.CARB 0.1W	5%	100Ω	
R1024	ERJ6GMYJ101	S.M.CARB 0.1W	5%	100Ω	
R1025	ERJ6GMYOR00	S.M.CARB LINK			
R1026	ERJ8GCMYOR00	S.M.CARB LINK			
R1031	ERJ6GMYJ153	S.M.CARB 0.1W	5%	15KΩ	
R1032	ERJ6GMYJ153	S.M.CARB 0.1W	5%	15KΩ	
R1033	ERJ6GMYJ101	S.M.CARB 0.1W	5%	100Ω	
R1034	ERJ6GMYJ101	S.M.CARB 0.1W	5%	100Ω	
R1036	ERJ6GMYJ101	S.M.CARB 0.1W	5%	100Ω	
R1038	ERJ6GMYJ101	S.M.CARB 0.1W	5%	100Ω	
R1041	ERJ6GMYJ101	S.M.CARB 0.1W	5%	100Ω	
R1042	ERJ6GMYJ101	S.M.CARB 0.1W	5%	100Ω	
R1061	ERJ6GMYJ562	S.M.CARB 0.1W	5%	5K6Ω	
R1062	ERJ6GMYJ473	S.M.CARB 0.1W	5%	47KΩ	
R1064	ERJ6GMYJ681	S.M.CARB 0.1W	5%	680Ω	
R1065	ERJ6GMYOR00	S.M.CARB LINK			
R1066	ERJ6GMYJ470	S.M.CARB 0.1W	5%	47Ω	
R1071	ERJ6GMYJ473	S.M.CARB 0.1W	5%	47KΩ	
R1072	ERJ6GMYJ101	S.M.CARB 0.1W	5%	100Ω	
R1073	ERJ6GMYJ152	S.M.CARB 0.1W	5%	1K5Ω	
R1081	ERJ6GMYJ562	S.M.CARB 0.1W	5%	5K6Ω	

Ref No.	Part No.	Description			
R1082	ERJ6GMYJ473	S.M.CARB 0.1W	5%	47KΩ	
R1084	ERJ6GMYJ681	S.M.CARB 0.1W	5%	680Ω	
R1085	ERJ6GMY0R00	S.M.CARB LINK			
R1086	ERJ6GMYJ470	S.M.CARB 0.1W	5%	47Ω	
R1091	ERJ6GMYJ473	S.M.CARB 0.1W	5%	47KΩ	
R1092	ERJ6GMYJ101	S.M.CARB 0.1W	5%	100Ω	
R1093	ERJ6GMYJ152	S.M.CARB 0.1W	5%	1K5Ω	
R1095	ERJ8GCMYJ474	FILM 0.125W	5%	470KΩ	
R1101	ERJ6GMYJ750	S.M.CARB 0.1W	5%	75Ω	
R1115	ERJ6GMY0R00	S.M.CARB LINK			
R1116	ERJ6GMYJ104	S.M.CARB 0.1W	5%	100KΩ	
R1117	ERJ6GMYJ104	S.M.CARB 0.1W	5%	100KΩ	
R1120	ERJ6GMYJ470	S.M.CARB 0.1W	5%	47Ω	
R1121	ERJ6GMYJ750	S.M.CARB 0.1W	5%	75Ω	
R1122	ERJ6GMYJ750	S.M.CARB 0.1W	5%	75Ω	
R1123	ERJ6GMYJ102	S.M.CARB 0.1W	5%	1KΩ	
R1124	ERJ6GMYJ680	S.M.CARB 0.1W	5%	68Ω	
R1126	ERQ14AJ100	METAL 0.25W	5%	10Ω	Δ
R1128	ERJ6GMYJ471	S.M.CARB 0.1W	5%	470Ω	
R1129	ERJ6GMYJ561	S.M.CARB 0.1W	5%	560Ω	
R1130	ERJ6GMYJ680	S.M.CARB 0.1W	5%	68Ω	
R1131	ERJ6GMYJ101	S.M.CARB 0.1W	5%	100Ω	
R1132	ERJ6GMYJ103	S.M.CARB 0.1W	5%	10KΩ	
R1133	ERJ6GMYJ103	S.M.CARB 0.1W	5%	10KΩ	
R1134	ERJ6GMYJ682	S.M.CARB 0.1W	5%	6K8Ω	
R1135	ERJ6GMYJ471	S.M.CARB 0.1W	5%	470Ω	
R1136	ERJ6GMYJ333	S.M.CARB 0.1W	5%	33KΩ	
R1151	ERJ6GMYJ750	S.M.CARB 0.1W	5%	75Ω	
R1152	ERJ6GMYJ104	S.M.CARB 0.1W	5%	100KΩ	
R1153	ERJ6GMYJ104	S.M.CARB 0.1W	5%	100KΩ	
R1156	ERJ6GMYJ470	S.M.CARB 0.1W	5%	47Ω	
R1158	ERJ6GMYJ470	S.M.CARB 0.1W	5%	47Ω	
R1159	ERJ6GMYJ750	S.M.CARB 0.1W	5%	75Ω	
R1161	ERJ6GMYJ682	S.M.CARB 0.1W	5%	6K8Ω	
R1162	ERJ6GMYJ333	S.M.CARB 0.1W	5%	33KΩ	
R1163	ERJ6GMYJ471	S.M.CARB 0.1W	5%	470Ω	
R1166	ERJ6GMYJ103	S.M.CARB 0.1W	5%	10KΩ	
R1167	ERJ6GMYJ101	S.M.CARB 0.1W	5%	100Ω	
R1168	ERJ6GMYJ680	S.M.CARB 0.1W	5%	68Ω	
R1169	ERJ6GMYJ471	S.M.CARB 0.1W	5%	470Ω	
R1171	ERJ6GMYJ750	S.M.CARB 0.1W	5%	75Ω	
R1172	ERJ6GMYJ102	S.M.CARB 0.1W	5%	1KΩ	
R1173	ERJ6GMYJ680	S.M.CARB 0.1W	5%	68Ω	
R1177	ERJ6GMYJ561	S.M.CARB 0.1W	5%	560Ω	
R1178	ERQ14AJ100	METAL 0.25W	5%	10Ω	Δ
R1179	ERJ6GMY0R00	S.M.CARB LINK			
R1180	ERJ6GMY0R00	S.M.CARB LINK			
R1181	ERJ6GMYJ103	S.M.CARB 0.1W	5%	10KΩ	
R1182	ERJ6GMYJ101	S.M.CARB 0.1W	5%	100Ω	
R1183	ERJ6GMYJ680	S.M.CARB 0.1W	5%	68Ω	
R1184	ERJ6GMYJ103	S.M.CARB 0.1W	5%	10KΩ	
R1185	ERJ6GMYJ151	S.M.CARB 0.1W	5%	150Ω	
R1191	ERJ6GMYJ103	S.M.CARB 0.1W	5%	10KΩ	
R1192	ERJ6GMYJ101	S.M.CARB 0.1W	5%	100Ω	
R1193	ERJ6GMYJ680	S.M.CARB 0.1W	5%	68Ω	
R1194	ERJ6GMYJ103	S.M.CARB 0.1W	5%	10KΩ	
R1195	ERJ6GMYJ750	S.M.CARB 0.1W	5%	75Ω	
R1211	ERJ8GCMY0R00	S.M.CARB LINK			
R1212	ERJ8GCMY0R00	S.M.CARB LINK			
R1220	ERJ6GMY0R00	S.M.CARB LINK			
R1221	ERJ6GMYJ473	S.M.CARB 0.1W	5%	47KΩ	
R1222	ERJ6GMYJ473	S.M.CARB 0.1W	5%	47KΩ	
R1223	ERJ6GMY0R00	S.M.CARB LINK			
R1224	ERJ6GMY0R00	S.M.CARB LINK			
R1225	ERJ6GMYJ101	S.M.CARB 0.1W	5%	100Ω	
R1226	ERJ8GCMY0R00	S.M.CARB LINK			
R1227	ERJ8GCMY0R00	S.M.CARB LINK			
R1228	ERJ6GMY0R00	S.M.CARB LINK			
R1229	ERJ6GMY0R00	S.M.CARB LINK			
R1235	ERJ6GMY0R00	S.M.CARB LINK			
R1237	ERJ6GMYJ103	S.M.CARB 0.1W	5%	10KΩ	

Ref No.	Part No.	Description			
R1241	ERJ6GMYJ102	S.M.CARB 0.1W	5%	1KΩ	
R1242	ERJ6GMYJ102	S.M.CARB 0.1W	5%	1KΩ	
R1251	ERJ6GMYJ750	S.M.CARB 0.1W	5%	75Ω	
R1261	ERJ6GMY0R00	S.M.CARB LINK			
R1263	ERJ6GMYJ104	S.M.CARB 0.1W	5%	100KΩ	
R1264	ERJ6GMYJ104	S.M.CARB 0.1W	5%	100KΩ	
R1266	ERJ6GMYJ680	S.M.CARB 0.1W	5%	68Ω	
R1267	ERJ6GMYJ101	S.M.CARB 0.1W	5%	100Ω	
R1268	ERJ6GMYJ103	S.M.CARB 0.1W	5%	10KΩ	
R1269	ERJ6GMYJ750	S.M.CARB 0.1W	5%	75Ω	
R1270	ERJ6GMYJ470	S.M.CARB 0.1W	5%	47Ω	
R1273	ERJ6GMYJ470	S.M.CARB 0.1W	5%	47Ω	
R1275	ERJ8GCMY0R00	S.M.CARB LINK			
R1276	ERJ6GMYJ104	S.M.CARB 0.1W	5%	100KΩ	
R1277	ERJ6GMYJ104	S.M.CARB 0.1W	5%	100KΩ	
R1281	ERJ6GMYJ153	S.M.CARB 0.1W	5%	15KΩ	
R1282	ERJ6GMYJ101	S.M.CARB 0.1W	5%	100Ω	
R1283	ERJ6GMYJ153	S.M.CARB 0.1W	5%	15KΩ	
R1284	ERJ6GMYJ101	S.M.CARB 0.1W	5%	100Ω	
R1310	ERJ8GCMY0R00	S.M.CARB LINK			
R1315	ERJ8GCMY0R00	S.M.CARB LINK			
R1322	ERJ6GMYJ100	S.M.CARB 0.1W	5%	10Ω	
R1326	ERJ6GMYJ101	S.M.CARB 0.1W	5%	100Ω	
R1347	ERJ6GMY0R00	S.M.CARB LINK			
R1349	ERJ6GMYJ473	S.M.CARB 0.1W	5%	47KΩ	
R1381	ERJ6GMYJ223	S.M.CARB 0.1W	5%	22KΩ	
R1382	ERJ6GMYJ473	S.M.CARB 0.1W	5%	47KΩ	
R1412	ERJ6GMYJ471	S.M.CARB 0.1W	5%	470Ω	
R1413	ERJ8GCMY0R00	S.M.CARB LINK			
R1464	ERJ6GMYJ102	S.M.CARB 0.1W	5%	1KΩ	
R1466	ERJ6GMYJ222	S.M.CARB 0.1W	5%	2K2Ω	
R1467	ERJ6GMY0R00	S.M.CARB LINK			
R1476	ERJ6GMYJ222	S.M.CARB 0.1W	5%	2K2Ω	
R1477	ERJ6GMY0R00	S.M.CARB LINK			
R1486	ERJ6GMYJ222	S.M.CARB 0.1W	5%	2K2Ω	
R1487	ERJ6GMYJ471	S.M.CARB 0.1W	5%	470Ω	
R1496	ERJ6GMYJ222	S.M.CARB 0.1W	5%	2K2Ω	
R1497	ERJ6GMYJ471	S.M.CARB 0.1W	5%	470Ω	
R1606	ERJ6GMY0R00	S.M.CARB LINK			
R1608	ERJ8GCMY0R00	S.M.CARB LINK			
R1609	ERJ6GMYJ475	S.M.CARB 0.1W	5%	4K7Ω	
R1610	ERJ6GMYJ102	S.M.CARB 0.1W	5%	1KΩ	
R1611	ERJ6GMYJ102	S.M.CARB 0.1W	5%	1KΩ	
R1612	ERJ6GMYJ101	S.M.CARB 0.1W	5%	100Ω	
R1613	ERJ6GMYJ560	S.M.CARB 0.1W	5%	56Ω	
R1614	ERJ6GMYJ331	S.M.CARB 0.1W	5%	330Ω	
R1615	ERJ6GMYJ221	S.M.CARB 0.1W	5%	220Ω	
R1616	ERJ6GMYJ151	S.M.CARB 0.1W	5%	150Ω	
R1617	ERJ6GMYJ153	S.M.CARB 0.1W	5%	15KΩ	
R1618	ERJ6GMY0R00	S.M.CARB LINK			
R1620	ERJ6GMYJ222	S.M.CARB 0.1W	5%	2K2Ω	
R1621	ERJ6GMYJ102	S.M.CARB 0.1W	5%	1KΩ	
R1623	ERJ6GMYJ331	S.M.CARB 0.1W	5%	330Ω	
R1626	ERJ6GMYJ151	S.M.CARB 0.1W	5%	150Ω	
R1627	ERJ6GMYJ750	S.M.CARB 0.1W	5%	75Ω	
R1628	ERJ8GCMY0R00	S.M.CARB LINK			
R1629	ERJ6GMY0R00	S.M.CARB LINK			
R1630	ERJ6GMYJ101	S.M.CARB 0.1W	5%	100Ω	
R1631	ERJ6GMY0R00	S.M.CARB LINK			
R1632	ERJ6GMYJ471	S.M.CARB 0.1W	5%	470Ω	
R1633	ERJ6GMYJ101	S.M.CARB 0.1W	5%	100Ω	
R1634	ERJ6GMYJ152	S.M.CARB 0.1W	5%	155Ω	
R1635	ERJ6GMY0R00	S.M.CARB LINK			
R1636	ERJ6GMYJ750	S.M.CARB 0.1W	5%	75Ω	
R1637	ERJ8GCMYJ221	S.M.CARB 0.1W	5%	220Ω	
R1642	ERJ6GMYJ471	S.M.CARB 0.1W	5%	470Ω	
R1643	ERJ6GMYJ101	S.M.CARB 0.1W	5%	100Ω	
R1644	ERJ6GMYJ152	S.M.CARB 0.1W	5%	155Ω	
R1645	ERJ6GMY0R00	S.M.CARB LINK			
R1646	ERJ6GMYJ750	S.M.CARB 0.1W	5%	75Ω	
R1647	ERJ8GCMYJ221	S.M.CARB 0.1W	5%	220Ω	

Ref No.	Part No.	Description			
R1652	ERJ6GMYJ471	S.M.CARB 0.1W	5%	470Ω	
R1653	ERJ6GMYJ101	S.M.CARB 0.1W	5%	100Ω	
R1654	ERJ6GMYJ152	S.M.CARB 0.1W	5%	1K5Ω	
R1655	ERJ6GMY0R00	S.M.CARB LINK			
R1656	ERJ6GMYJ750	S.M.CARB 0.1W	5%	75Ω	
R1657	ERJ8GCRYJ221	S.M.CARB 0.1W	5%	220Ω	
R1658	ERJ6GMYJ103	S.M.CARB 0.1W	5%	10KΩ	
R1659	ERJ6GMYJ102	S.M.CARB 0.1W	5%	1KΩ	
R1661	ERJ6GMYJ101	S.M.CARB 0.1W	5%	100Ω	
R1663	ERJ8GCRY0R00	S.M.CARB LINK			
R1664	ERJ6GMYJ472	S.M.CARB 0.1W	5%	4K7Ω	
R1666	ERJ6GMYJ101	S.M.CARB 0.1W	5%	100Ω	
R1667	ERJ6GMYJ104	S.M.CARB 0.1W	5%	100KΩ	
R1668	ERJ6GMYJ104	S.M.CARB 0.1W	5%	100KΩ	
R1669	ERJ6GMYJ472	S.M.CARB 0.1W	5%	4K7Ω	
R1670	ERJ6GMYJ472	S.M.CARB 0.1W	5%	4K7Ω	
R1671	ERJ6GMYJ472	S.M.CARB 0.1W	5%	4K7Ω	
R1672	ERJ6GMYJ472	S.M.CARB 0.1W	5%	4K7Ω	
R1673	ERJ6GMYJ101	S.M.CARB 0.1W	5%	100Ω	
R1674	ERJ6GMYJ472	S.M.CARB 0.1W	5%	4K7Ω	
R1675	ERJ8GCRY0R00	S.M.CARB LINK			
R1677	ERJ6GMYJ102	S.M.CARB 0.1W	5%	1KΩ	
R1678	ERJ6GMYJ103	S.M.CARB 0.1W	5%	10KΩ	
R1680	ERJ6GMYJ750	S.M.CARB 0.1W	5%	75Ω	
R1681	ERJ6GMYJ472	S.M.CARB 0.1W	5%	4K7Ω	
R1683	ERJ6GMYJ102	S.M.CARB 0.1W	5%	1KΩ	
R1684	ERJ6GMY0R00	S.M.CARB LINK			
R1685	ERJ6GMY0R00	S.M.CARB LINK			
R1691	ERJ6GMYJ750	S.M.CARB 0.1W	5%	75Ω	
R1692	ERJ6GMYJ750	S.M.CARB 0.1W	5%	75Ω	
R1693	ERJ6GMYJ750	S.M.CARB 0.1W	5%	75Ω	
R1694	ERJ6GMYJ750	S.M.CARB 0.1W	5%	75Ω	
R1696	ERJ6GMYJ103	S.M.CARB 0.1W	5%	10KΩ	
R1705	ERJ8GCRY0R00	S.M.CARB LINK			
R1706	ERJ8GCRY0R00	S.M.CARB LINK			
R1707	ERJ8GCRY0R00	S.M.CARB LINK			
R1708	ERJ6GMY0R00	S.M.CARB LINK			
R1709	ERJ6GMY0R00	S.M.CARB LINK			
R1713	ERJ8GCRY0R00	S.M.CARB LINK			
R1715	ERJ6GMY0R00	S.M.CARB LINK			
R1717	ERJ8GCRYJ221	S.M.CARB 0.1W	5%	220Ω	
R1750	ERJ8GCRY0R00	S.M.CARB LINK			
R1751	ERQ14AJ100	METAL 0.25W	5%	10Ω	Δ
R1753	ERJ6GMY0R00	S.M.CARB LINK			
R1756	ERJ6GMY0R00	S.M.CARB LINK			
R1760	ERJ8GCRY0R00	S.M.CARB LINK			
R1801	ERJ8GCRY0R00	S.M.CARB LINK			
R1804	ERJ6GMY0R00	S.M.CARB LINK			
R1805	ERJ8GCRY0R00	S.M.CARB LINK			
R1807	ERJ6GMYJ222	S.M.CARB 0.1W	5%	2K2Ω	
R1808	ERJ6GMYJ472	S.M.CARB 0.1W	5%	4K7Ω	
R1809	ERJ6GMYJ472	S.M.CARB 0.1W	5%	4K7Ω	
R1811	ERJ6GMYJ101	S.M.CARB 0.1W	5%	100Ω	
R1812	ERJ6GMYJ472	S.M.CARB 0.1W	5%	4K7Ω	
R1814	ERJ8GCRY0R00	S.M.CARB LINK			
R1815	ERJ6GMYJ101	S.M.CARB 0.1W	5%	100Ω	
R1816	ERJ6GMYJ473	S.M.CARB 0.1W	5%	47KΩ	
R1817	ERJ6GMYJ563	S.M.CARB 0.1W	5%	56KΩ	
R1818	ERJ6GMYJ393	S.M.CARB 0.1W	5%	39KΩ	
R1819	ERJ6GMYJ472	S.M.CARB 0.1W	5%	4K7Ω	
R1821	ERJ6GMYJ102	S.M.CARB 0.1W	5%	1KΩ	
R1822	ERJ6GMYJ392	S.M.CARB 0.1W	5%	3K9Ω	
R1823	ERJ6GMYJ472	S.M.CARB 0.1W	5%	4K7Ω	
R1824	ERJ6GMYJ473	S.M.CARB 0.1W	5%	47KΩ	
R1825	ERJ6GMYJ101	S.M.CARB 0.1W	5%	100Ω	
R1826	ERJ6GMYJ563	S.M.CARB 0.1W	5%	56KΩ	
R1827	ERJ6GMYJ393	S.M.CARB 0.1W	5%	39KΩ	
R1828	ERJ6GMYJ472	S.M.CARB 0.1W	5%	4K7Ω	
R1829	ERJ6GMYJ102	S.M.CARB 0.1W	5%	1KΩ	
R1831	ERJ6GMYJ392	S.M.CARB 0.1W	5%	3K9Ω	
R1832	ERJ6GMYJ472	S.M.CARB 0.1W	5%	4K7Ω	

Ref No.	Part No.	Description			
R1835	ERJ6GMYJ103	S.M.CARB 0.1W	5%	10KΩ	
R1836	ERJ8GCRY0R00	S.M.CARB LINK			
R1837	ERJ6GMYJ103	S.M.CARB 0.1W	5%	10KΩ	
R1838	ERJ6GMYJ331	S.M.CARB 0.1W	5%	330Ω	
R1839	ERJ6GMYJ472	S.M.CARB 0.1W	5%	4K7Ω	
R1841	ERJ8GCRY0R00	S.M.CARB LINK			
R1842	ERJ6GMYJ103	S.M.CARB 0.1W	5%	10KΩ	
R1843	ERJ6GMYJ472	S.M.CARB 0.1W	5%	4K7Ω	
R1844	ERJ6GMYJ103	S.M.CARB 0.1W	5%	10KΩ	
R1845	ERJ6GMYJ470	S.M.CARB 0.1W	5%	47Ω	
R1847	ERJ6GMYJ103	S.M.CARB 0.1W	5%	10KΩ	
R1849	ERJ6GMYJ472	S.M.CARB 0.1W	5%	4K7Ω	
R1851	ERJ6GMYJ472	S.M.CARB 0.1W	5%	4K7Ω	
R1852	ERJ8GCRY0R00	S.M.CARB LINK			
R1854	ERJ8GCRY0R00	S.M.CARB LINK			
R1856	ERJ6GMYJ103	S.M.CARB 0.1W	5%	10KΩ	
R1857	ERJ6GMYJ101	S.M.CARB 0.1W	5%	100Ω	
R1858	ERJ6GMYJ103	S.M.CARB 0.1W	5%	10KΩ	
R1859	ERJ6GMYJ101	S.M.CARB 0.1W	5%	100Ω	
R1860	ERJ6GMY0R00	S.M.CARB LINK			
R1863	ERJ6GMYJ472	S.M.CARB 0.1W	5%	4K7Ω	
R1865	ERJ8GCRY0R00	S.M.CARB LINK			
R1872	ERJ6GMYJ472	S.M.CARB 0.1W	5%	4K7Ω	
R1873	ERJ6GMYJ103	S.M.CARB 0.1W	5%	10KΩ	
R1875	ERJ6GMY0R00	S.M.CARB LINK			
R1878	ERJ6GMYJ101	S.M.CARB 0.1W	5%	100Ω	
R1879	ERJ6GMYJ103	S.M.CARB 0.1W	5%	10KΩ	
R1882	ERJ6GMYJ103	S.M.CARB 0.1W	5%	10KΩ	
R1883	ERJ8GCRY0R00	S.M.CARB LINK			
R1884	ERJ6GMYJ222	S.M.CARB 0.1W	5%	2K2Ω	
R1885	ERJ8GCRY0R00	S.M.CARB LINK			
R1886	ERJ6GMYJ222	S.M.CARB 0.1W	5%	2K2Ω	
R1887	ERJ6GMY0R00	S.M.CARB LINK			
R1888	ERJ6GMYJ103	S.M.CARB 0.1W	5%	10KΩ	
R1889	ERJ8GCRY0R00	S.M.CARB LINK			
R1891	ERJ6GMYJ472	S.M.CARB 0.1W	5%	4K7Ω	
R1892	ERJ8GCRY0R00	S.M.CARB LINK			
R1893	ERJ6GMYJ472	S.M.CARB 0.1W	5%	4K7Ω	
R1897	ERJ6GMYJ103	S.M.CARB 0.1W	5%	10KΩ	
R1901	ERJ8GCRY0R00	S.M.CARB LINK			
R1903	ERJ6GMY0R00	S.M.CARB LINK			
R1910	ERJ8GCRY0R00	S.M.CARB LINK			
R1920	ERJ6GMYJ472	S.M.CARB 0.1W	5%	4K7Ω	
R1921	ERJ6GMYJ472	S.M.CARB 0.1W	5%	4K7Ω	
R1922	ERJ6GMYJ102	S.M.CARB 0.1W	5%	1KΩ	
R1925	ERJ6GMYJ331	S.M.CARB 0.1W	5%	330Ω	
R1933	ERJ6GMY0R00	S.M.CARB LINK			
R1941	ERQ14AJ100	METAL 0.25W	5%	10Ω	Δ
R1942	ERJ8GCRY0R00	S.M.CARB LINK			
R1953	ERJ6GMYJ101	S.M.CARB 0.1W	5%	100Ω	
R1957	ERJ6GMYJ101	S.M.CARB 0.1W	5%	100Ω	
R1958	ERJ6GMYJ101	S.M.CARB 0.1W	5%	100Ω	
R1959	ERJ6GMYJ101	S.M.CARB 0.1W	5%	100Ω	
R1961	ERJ6GMYJ101	S.M.CARB 0.1W	5%	100Ω	
R1962	ERJ6GMYJ101	S.M.CARB 0.1W	5%	100Ω	
R1963	ERJ6GMYJ101	S.M.CARB 0.1W	5%	100Ω	
R1964	ERJ6GMYJ101	S.M.CARB 0.1W	5%	100Ω	
R1965	ERJ6GMYJ101	S.M.CARB 0.1W	5%	100Ω	
R1983	ERJ6GMYJ103	S.M.CARB 0.1W	5%	10KΩ	
R1986	ERJ8GCRY0R00	S.M.CARB LINK			
R1987	ERJ6GMY0R00	S.M.CARB LINK			
R1993	ERJ6GMYJ101	S.M.CARB 0.1W	5%	100Ω	
R3101	ERJ6GMYJ562	S.M.CARB 0.1W	5%	5K6Ω	
R3102	ERJ6GMYJ562	S.M.CARB 0.1W	5%	5K6Ω	
R3103	ERJ6GMYJ562	S.M.CARB 0.1W	5%	5K6Ω	
R3104	ERJ6GMYJ102	S.M.CARB 0.1W	5%	1KΩ	
R3106	ERJ6GMYJ563	S.M.CARB 0.1W	5%	56KΩ	
R3107	ERJ6GMYJ472	S.M.CARB 0.1W	5%	4K7Ω	
R3108	ERJ6GMYJ102	S.M.CARB 0.1W	5%	1KΩ	
R3109	ERJ6GMYJ101	S.M.CARB 0.1W	5%	100Ω	
R3111	366-81024	S.M.CARB 0.1W	5%	2K2Ω	

Ref No.	Part No.	Description			
R3112	ERJ6GMYJ152	S.M.CARB 0.1W	5%	1K5Ω	
R3113	366-78713	S.M.CARB 0.1W	5%	1K5Ω	
R3121	ERJ6GMYJ475	S.M.CARB 0.1W	5%	4M7Ω	
R3122	ERJ6GMYJ222	S.M.CARB 0.1W	5%	2K2Ω	
R3123	ERJ6GMYJ471	S.M.CARB 0.1W	5%	470Ω	
R3124	ERJ6GMYJ681	S.M.CARB 0.1W	5%	680Ω	
R3126	ERJ6GMYJ122	S.M.CARB 0.1W	5%	1K2Ω	
R3127	ERQ14AJ100	METAL 0.25W	5%	10Ω	▲
R3128	ERQ14AJ820	METAL 0.25W	5%	82Ω	▲
R3129	ERQ14AJ820	METAL 0.25W	5%	82Ω	▲
R3130	ERJ6GMYJ100	S.M.CARB 0.1W	5%	10Ω	
R3131	ERD25TJ563	CARBON 0.25W	5%	56KΩ	
R3132	ERD25TJ122	CARBON 0.25W	5%	1K2Ω	
R3133	ERD25TJ2R7	CARBON 0.25W	5%	2R7Ω	
R3134	ERDS1FYJ390	CARBON 0.5W	5%	39Ω	▲
R3135	ERJ6GMYJ100	S.M.CARB 0.1W	5%	10Ω	
R3136	ERD25TJ563	CARBON 0.25W	5%	56KΩ	
R3137	ERD25TJ122	CARBON 0.25W	5%	1K2Ω	
R3138	ERD25TJ2R7	CARBON 0.25W	5%	2R7Ω	
R3139	ERDS1FYJ390	CARBON 0.5W	5%	39Ω	▲
R3141	ERDS1FYJ101	CARBON 0.5W	5%	100Ω	▲
R3142	ERJ6GMYJ472	S.M.CARB 0.1W	5%	4K7Ω	
R3143	ERJ8GCRYJ222	FILM 0.125W	5%	2K2Ω	
R3144	ERJ6GMYJ681	S.M.CARB 0.1W	5%	680Ω	
R3146	ERDS1FYJ181	CARBON 0.5W	5%	180Ω	▲
R3152	ERQ12HJ102	METAL 0.5W	5%	1KΩ	▲
R3153	ERQ14AJ3R9	FUSIBLE 0.25W	5%	3.9Ω	▲
R3160	ERJ6GMYJ100	S.M.CARB 0.1W	5%	10Ω	
R3161	ERJ6GMYJ102	S.M.CARB 0.1W	5%	1KΩ	
R3162	ERJ6GMYJ102	S.M.CARB 0.1W	5%	1KΩ	
R3163	ERJ6GMYJ332	S.M.CARB 0.1W	5%	3K3Ω	
R3164	ERJ6GMYJ471	S.M.CARB 0.1W	5%	470Ω	
R3166	ERJ6GMYJ471	S.M.CARB 0.1W	5%	470Ω	
R3167	ERJ6GMYJ471	S.M.CARB 0.1W	5%	470Ω	
R3168	ERJ6GMYJ102	S.M.CARB 0.1W	5%	1KΩ	
R3169	ERJ6GMYJ102	S.M.CARB 0.1W	5%	1KΩ	
R3170	ERJ6GMYJ100	S.M.CARB 0.1W	5%	10Ω	
R3171	ERJ6GMYJ102	S.M.CARB 0.1W	5%	1KΩ	
R3172	ERJ6GMYJ102	S.M.CARB 0.1W	5%	1KΩ	
R3173	ERJ6GMYJ332	S.M.CARB 0.1W	5%	3K3Ω	
R3174	ERJ6GMYJ471	S.M.CARB 0.1W	5%	470Ω	
R3176	ERJ6GMYJ471	S.M.CARB 0.1W	5%	470Ω	
R3177	ERJ6GMYJ471	S.M.CARB 0.1W	5%	470Ω	
R3178	ERJ6GMYJ102	S.M.CARB 0.1W	5%	1KΩ	
R3179	ERJ6GMYJ102	S.M.CARB 0.1W	5%	1KΩ	
R3180	ERJ6GMYJ100	S.M.CARB 0.1W	5%	10Ω	
R3181	ERJ6GMYJ102	S.M.CARB 0.1W	5%	1KΩ	
R3182	ERJ6GMYJ102	S.M.CARB 0.1W	5%	1KΩ	
R3183	ERJ6GMYJ332	S.M.CARB 0.1W	5%	3K3Ω	
R3184	ERJ6GMYJ471	S.M.CARB 0.1W	5%	470Ω	
R3186	ERJ6GMYJ471	S.M.CARB 0.1W	5%	470Ω	
R3187	ERJ6GMYJ471	S.M.CARB 0.1W	5%	470Ω	
R3188	ERJ6GMYJ102	S.M.CARB 0.1W	5%	1KΩ	
R3189	ERJ6GMYJ102	S.M.CARB 0.1W	5%	1KΩ	
R3307	ERJ6GMYJ101	S.M.CARB 0.1W	5%	100Ω	
R3308	ERJ6GMYJ101	S.M.CARB 0.1W	5%	100Ω	
R3309	ERJ6GMYJ101	S.M.CARB 0.1W	5%	100Ω	
R3352	ERJ6GMYJ475	S.M.CARB 0.1W	5%	4M7Ω	
R3353	ERJ6GMYJ100	S.M.CARB 0.1W	5%	10Ω	
R3356	ERJ6GMYJ103	S.M.CARB 0.1W	5%	10KΩ	
R3358	ERJ6GMYJ100	S.M.CARB 0.1W	5%	10Ω	
R3359	ERJ6GMYJ681	S.M.CARB 0.1W	5%	680Ω	
R3362	ERC12GK105D	SOLID 0.5W	10%	1MΩ	
R3363	ERC12GK821D	SOLID 0.5W	10%	820Ω	
R3364	ERC12GK821D	SOLID 0.5W	10%	820Ω	
R3365	ERD25TJ220	CARBON 0.25W	5%	22Ω	
R3366	ERQ12HJ101	FUSIBLE 0.5W	5%	100Ω	▲
R3367	ERJ6GMYJ102	S.M.CARB 0.1W	5%	1KΩ	
R3368	ERJ6GMYJ472	S.M.CARB 0.1W	5%	4K7Ω	
R3369	ERJ6GMYJ392	S.M.CARB 0.1W	5%	3K9Ω	

Ref No.	Part No.	Description			
R3370	ERJ6GMYJ100	S.M.CARB 0.1W	5%	10Ω	
R3371	ERJ6GMYJ272	S.M.CARB 0.1W	5%	2K7Ω	
R3372	ERJ6GMYJ392	S.M.CARB 0.1W	5%	3K9Ω	
R3373	ERJ6GMYJ152	S.M.CARB 0.1W	5%	1K5Ω	
R3374	ERDS1TJ104	CARBON 0.5W	5%	100KΩ	
R3375	ERG2ANJ183	METAL 2W	5%	18KΩ	
R3376	ERD25TJ561	CARBON 0.25W	5%	560Ω	
R3377	ERJ6GMY0R00	S.M.CARB LINK			
R3378	ERC12GK821D	SOLID 0.5W	10%	820Ω	
R3379	ERD25TJ103	CARBON 0.25W	5%	10KΩ	
R3380	ERJ6GMYJ100	S.M.CARB 0.1W	5%	10Ω	
R3381	ERJ6GMYJ272	S.M.CARB 0.1W	5%	2K7Ω	
R3382	ERJ6GMYJ392	S.M.CARB 0.1W	5%	3K9Ω	
R3383	ERJ6GMYJ152	S.M.CARB 0.1W	5%	1K5Ω	
R3384	ERDS1TJ104	CARBON 0.5W	5%	100KΩ	
R3385	ERG2ANJ183	METAL 2W	5%	18KΩ	
R3386	ERD25TJ561	CARBON 0.25W	5%	560Ω	
R3388	ERC12GK821D	SOLID 0.5W	10%	820Ω	
R3389	ERD25TJ103	CARBON 0.25W	5%	10KΩ	
R3390	ERJ6GMYJ100	S.M.CARB 0.1W	5%	10Ω	
R3391	ERJ6GMYJ272	S.M.CARB 0.1W	5%	2K7Ω	
R3392	ERJ6GMYJ392	S.M.CARB 0.1W	5%	3K9Ω	
R3393	ERJ6GMYJ152	S.M.CARB 0.1W	5%	1K5Ω	
R3394	ERDS1TJ104	CARBON 0.5W	5%	100KΩ	
R3395	ERG2ANJ183	METAL 2W	5%	18KΩ	
R3396	ERD25TJ561	CARBON 0.25W	5%	560Ω	
R3397	ERJ6GMY0R00	S.M.CARB LINK			
R3398	ERC12GK821D	SOLID 0.5W	10%	820Ω	
R3399	ERD25TJ103	CARBON 0.25W	5%	10KΩ	
R8001	ERJ8GCRY0R00	S.M.CARB LINK			
R8005	ERJ8GCRYJ473	FILM 0.125W	5%	47KΩ	
R8007	ERJ8GCRYJ103	FILM 0.125W	5%	10KΩ	
R8016	ERJ8GCRYJ331	FILM 0.125W	5%	330Ω	
R8019	ERJ8GCRY0R00	S.M.CARB LINK			
R8102	ERJ8GCRYJ151	S.M.CARB 0.1W	5%	150Ω	
R8103	ERJ8GCRY0R00	S.M.CARB LINK			
R8106	ERJ8GCRYJ391	S.M.CARB 0.1W	5%	390Ω	
R8111	ERJ8GCRYJ103	FILM 0.125W	5%	10KΩ	
R8112	ERJ8GCRYJ103	FILM 0.125W	5%	10KΩ	
R8113	ERJ8GCRYJ473	FILM 0.125W	5%	47KΩ	
R8114	ERJ8GCRYJ102	FILM 0.125W	5%	1KΩ	
R8215	ERJ8GCRY0R00	S.M.CARB LINK			
R8222	ERJ8GCRYJ102	FILM 0.125W	5%	1KΩ	
R8314	ERJ8GCRYJ470	FILM 0.125W	5%	47Ω	
R8315	ERJ8GCRYJ470	FILM 0.125W	5%	47Ω	
R8331	ERJ8GCRYJ470	FILM 0.125W	5%	47Ω	
R8332	ERJ8GCRYJ750	FILM 0.125W	5%	75Ω	
R8336	ERJ8GCRYJ470	FILM 0.125W	5%	47Ω	
R8337	ERJ8GCRYJ750	FILM 0.125W	5%	75Ω	
R8401	366-79915	S.M.CARB 0.1W	5%	22Ω	
R8402	366-79915	S.M.CARB 0.1W	5%	22Ω	
R8403	ERJ8GCRYJ102	FILM 0.125W	5%	1KΩ	
R8406	ERJ8GCRYJ102	FILM 0.125W	5%	1KΩ	
R8407	ERJ8GCRYJ103	FILM 0.125W	5%	1KΩ	
R8408	ERJ8GCRYJ102	FILM 0.125W	5%	1KΩ	
R8411	ERJ8GCRYJ473	FILM 0.125W	5%	47KΩ	
R8412	ERJ8GCRYJ103	FILM 0.125W	5%	1KΩ	
R8413	ERJ8GCRYJ102	FILM 0.125W	5%	1KΩ	
R8416	ERJ8GCRYJ101	FILM 0.125W	5%	10Ω	
R8417	ERJ8GCRYJ101	FILM 0.125W	5%	10Ω	
R8418	ERJ8GCRYJ100	FILM 0.125W	5%	10Ω	
R8433	ERJ8GCRYJ102	FILM 0.125W	5%	1KΩ	
R8436	ERJ8GCRYJ102	FILM 0.125W	5%	1KΩ	
R8437	ERJ8GCRYJ103	FILM 0.125W	5%	1KΩ	
R8438	ERJ8GCRYJ102	FILM 0.125W	5%	1KΩ	
R8441	ERJ8GCRYJ473	FILM 0.125W	5%	47KΩ	
R8442	ERJ8GCRYJ103	FILM 0.125W	5%	1KΩ	
R8443	ERJ8GCRYJ102	FILM 0.125W	5%	1KΩ	
R8446	ERJ8GCRYJ101	FILM 0.125W	5%	10Ω	

Ref No.	Part No.	Description	
R8447	ERJ8GCYJ101	FILM 0.125W 5% 100Ω	
SWITCHES			
S8004	467-17895	SWITCH	
S8005	467-17895	SWITCH	
S8006	467-17895	SWITCH	
S8007	467-17895	SWITCH	
S8008	467-17895	SWITCH	
S8101	471-24613	POWER SWITCH	▲
Parts for TX-28WD1C only			
10)	396-86105454	P.C.B. (DIGITAL SIGNAL)	▲
12)	396-86107451	PCB (CHASSIS)	▲
15)	715-86356004	MODEL NAME PLATE	
18)	708-86354002	SPEAKER GRILL	
19)	272-25347	SPEAKER	
Parts for TX-28WD1E only			
10)	396-86105451	P.C.B. (DIGITAL SIGNAL)	▲
12)	396-86107452	PCB (CHASSIS)	▲
15)	715-86356005	MODEL NAME PLATE	
18)	708-20735	SPEAKER GRILL	
19)	272-20927	SPEAKER WOOFER	
21)	272-21473	SPEAKER TWEETER	
I1941	X24C16-WD1E	EEPROM MEMORY I.C.	
I1301	MSP3410-15	AUDIO I.C.	

Ref No.	Part No.	Description	
TRANSFORMERS			
T528	5270100800	TRANSFORMER	▲
T531	ZTFH65005A	TRANSFORMER	▲
T612	298-22306	CHOKE	
T639	490-24257	TRANSFORMER	▲
T8101	490-22142	POWER TRANSFORMER	▲
FILTERS			
X501	385017297	CRYSTAL	
X711	290-20910	FILTER	
X1321	10082044	CRYSTAL	
X1608	385-24284	CRYSTAL	
X1854	385-22560	CRYSTAL	
I1941	X24C16-WD1C	EEPROM MEMORY I.C.	
I1301	MSP3400-15	AUDIO I.C.	
	TQB8E2004-3	INSTRUCTION BOOK	▲
	TQB8E2051E	INSTRUCTION BOOK (SPANISH)	▲
	TQB8E2051F	INSTRUCTION BOOK (SWEDISH)	▲
	TQB8E2051G	INSTRUCTION BOOK (NORWEGIAN)	▲
	TQB8E2051K	INSTRUCTION BOOK (DANISH)	▲
	TQB8E2051H	INSTRUCTION BOOK (FINNISH)	▲
	TQB8E2051A	INSTRUCTION BOOK (GERMAN)	▲
	TQB8E2051D	INSTRUCTION BOOK (FRENCH)	▲
	TQB8E2051B	INSTRUCTION BOOK (DUTCH)	▲